EIKI

Owner's Manual

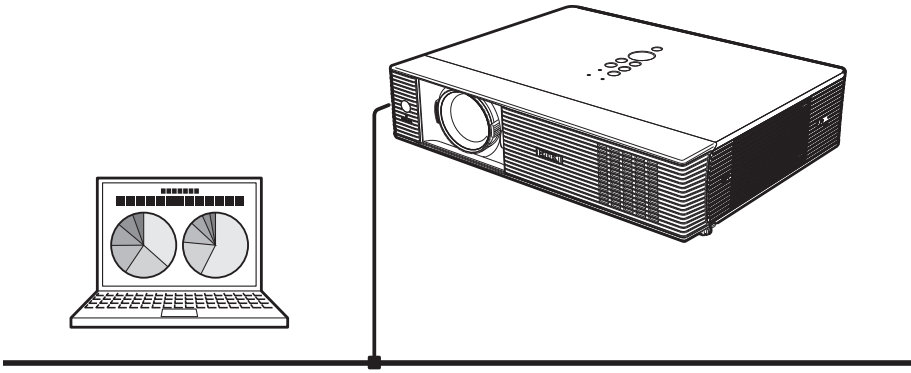
Network Set-up and Operation For Macintosh

Wired and Wireless Setting

Projector Set-up and Operation

Network Capture

We make finding the Writeboard easy
TOUCHBOARDS
1-866-942-6273 .COM
205 Westwood Ave, Long Branch, NJ 07740
Phone: 866-94 BOARDS (26273) / (732)-222-1511
Fax: (732)-222-7088 | E-mail: sales@touchboards.com



This is the manual for the Network function.
Read this manual thoroughly to operate the Network function.
First, read the owner's manual of the projector to understand the basic operation of the projector and the safety instructions.
The safety instructions in the owner's manuals should be followed strictly.

Compliance

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

Model Number	: QXXAVC922---P
Trade Name	: EIKI
Responsible party	: EIKI International, Inc.
Address	: 30251 Esperanza Rancho Santa Margarita CA 92688-2132
Telephone No.	: 800-242-3454 (949-457-0200)

This device complies with Part 15 of FCC Rules and RSS-Gen of IC Rules. Operation is subject to the following two conditions: (1) the device may not cause interference, and (2) the device must accept any interference, including interference that may cause undesired operation of this device.

CAUTION: Properly shielded a grounded cables and connectors must be used for connection to host computer and /or peripherals in order to meet FCC emission limits.
VGA cable with ferrite core must be used for RF interference suppression.

For Canadian Users

This Class B digital apparatus complies with Canadian ICES-003.
Cet apparei numérique de la classe B est conforme à la norme NMB-003 du Canada.

FCC Warning

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF Exposure Warning

- This transmitter must be co-located or operated in conjunction with any other antenna or transmitter.
- This equipment complies with FCC radiation exposure limits set forth for uncontrolled equipment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. This equipment must be installed and operated with at least 20cm and more between the radiator and person's body (excluding extremities: hands, wrists, feet and ankles).

The CE Mark is a Directive conformity mark of the European Community (EC).

The Alert Mark is a Directive conformity mark of the European Community.

English	Hereby, EIKI industrial Co., Ltd., declares that this WLAN Module (QXXAVC922---P) is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Česky [Czech]	EIKI industory Co., Ltd. tímto prohlašuje, že tento WLAN Module (QXXAVC922---P) je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede EIKI industrial Co., Ltd. erklærer herved, at følgende udstyr WLAN Module (QXXAVC922---P) overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erklärt EIKI industrial Co., Ltd., dass sich das Gerät WLAN Module (QXXAVC922---P) in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab EIKI industrial Co., Ltd. seadme WLAN Module (QXXAVC922---P) vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
Español [Spanish]	Por medio de la presente EIKI industrial Co., Ltd. declara que el WLAN Module (QXXAVC922---P) cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ EIKI industrial Co., Ltd. ΔΗΛΩΝΕΙ ΟΤΙ WLAN Module (QXXAVC922---P) ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente EIKI industrial Co., Ltd. déclare que l'appareil WLAN Module (QXXAVC922---P) est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente EIKI industrial Co., Ltd. dichiara che questo WLAN Module (QXXAVC922---P) è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo EIKI industrial Co., Ltd., deklarē, ka WLAN Module (QXXAVC922---P) atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo EIKI industrial Co., Ltd.deklaruoja, kad šis WLAN Module (QXXAVC922---P) atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart EIKI industrial Co., Ltd. dat het toestel WLAN Module (QXXAVC922---P) in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, EIKI industrial Co., Ltd., jiddikjara li dan WLAN Module (QXXAVC922---P) jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, EIKI industrial Co., Ltd. nyilatkozom, hogy a WLAN Module (QXXAVC922---P) megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
Polski [Polish]	Niniejszym EIKI industrial Co., Ltd. oświadcza, że WLAN Module (QXXAVC922---P) jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	EIKI industrial Co., Ltd. declara que este (QXXAVC922---P) está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	EIKI industrial Co., Ltd. izjavlja, da je ta (QXXAVC922---P) v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	EIKI industrial Co., Ltd. týmto vyhlasuje, že (QXXAVC922---P) spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]	EIKI industrial Co., Ltd. vakuuttaa täten että (QXXAVC922---P) tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar EIKI industrial Co., Ltd. att denna (QXXAVC922---P) står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Islenska [Icelandic]	Hér með lýsir EIKI industrial Co., Ltd. yfir því að (QXXAVC922---P) er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
Norsk [Norwegian]	EIKI industrial Co., Ltd. erklærer herved at utstyret (QXXAVC922---P) er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

Safety instructions

CAUTION IN USING THE PROJECTOR VIA NETWORKS

- When you find a problem with the projector, remove the power cable immediately and inspect the unit. Using the projector with failure may cause fire or other accidents.
- If you remotely use the projector via networks, carry out a safety check regularly and take particular care to its environment. Incorrect installation may cause fire or other accidents.

CAUTION IN USING NETWORK FUNCTION

- EIKI industrial Co., Ltd. assumes no responsibility for the loss or damage of data, or damage of the computer caused by using this projector. Making back-up copies of valuable data in your computer is recommended.

Caution about Radio Wave

This unit operates in 2.4 GHz band, the same frequency band used for industrial, scientific, and medical equipment (such as pacemaker), as well as amateur radio stations.

Please read "Safety Instructions" section and make sure the following cautions.

1. Be sure that there are no other devices in the area that may use the same frequency band as Projector.
2. If any other devices are causing radio interferences, change the communication frequency channel or move to other location.

Trademarks and Copyright

- Macintosh is a registered trademark of Apple, Inc. in the USA and other countries.
- PowerPC is a registered trademark of IBM Corporation.
- Intel Core is a registered trademark of Intel Corporation in the USA and other countries.
- Other company names, product names or other names noted in this manual are trademarks or registered trademarks of the respective companies. Note that ® and TM marks are not indicated in the text of this manual.

Notes

- The contents of this manual are subject to change without notice.
- You may not copy the printed materials accompanying with the software.
- We shall not be responsible for any damages caused by reliance on this manual.

Expression/Abbreviation

The OS of the computer and the Web browser described in this manual is MAC OS X v10.4 and Safari 3. In case of another OS or Web browser, some instruction procedures may differ from the actual operation depending on your computer environment.

Use of this manual

This manual does not provide the description of basic operation and functions for computer, web browser, projector and network. For instructions about each piece of equipment or application software, please refer to the respective booklet.

Table of contents

Compliance 2
Safety instructions 4
Table of contents 5
Operating environment and configuration 7
Required operating environment for computers 7
Network specifications of the projector 8

1. About LAN functions 9

LAN functions and the features 10
Image projecting system via LAN 10
An example of the connection 11
LAN connection modes 12

2. Setup procedures 15

Installing the software 17

3. Names and functions of the operation screen 21

Network connection standby display 22
Network Capture 5 window 23

4. Wired LAN configurations 25

Connecting to the LAN line 26
Network environment settings 26
Confirming the operation 28
Network PIN code 30
Network information 30
Wired factory default 30
Wired LAN factory default settings 31

5. Wireless LAN configurations 33

Setting the network environment 34
Setting procedures 34
Configuring security with the projector 36
Network PIN code 39
Network information 39
Wireless factory default 39
WIRELESS indicator display 40
Wireless LAN factory default settings 41

6. Basic setting and operation 43

Starting up the Browser 44
How to use the setting page 46

Initial setting....48
Network configuration....51
Configuring wireless LAN setting and security setting....53
E-mail setting....55
SNMP setting....59

7. Controlling the projector....63

Power control and status check....64
Controls....66
PC adjustment....70
Setting up the projector....71
Timer setting....74
Projector information....77
Multi-control....79

8. Network capture functions....85

About Network Capture function....86
Using the Real Time Capture....89
Error information....94

9. Appendix....95

Use of telnet....96
Web browser setting....98
Firewall setting for MAC OS X v 10.4....101
Firewall setting for MAC OS X v 10.5....102
Troubleshooting....103
Terminology....106

Operating environment and configuration

Required operating environment for computers

When operating the projector via the networks, computers should meet the operating environment below.

OS		MAC OS X v 10.4 or later
CPU		800 MHz PowerPC G4 or faster, or 1.8 GHz Intel Core processor or faster
Memory		256MB or more (512MB is recommended)
Free HDD Space		100MB
Screen Resolution		Required to support any of VGA (640 x 480), SVGA (800 x 600), XGA (1024 x 768), The color number should be either 16 bit (65536 colors) or 24/32 bit (16.77 million colors).
Communication Protocol		TCP/IP
Network Correspond	Wireless LAN	Correspond to IEEE802.11b/g
	Wired LAN	Correspond to 100BASE-TX (100Mbpd) /10BASE-T (10Mbps)
Browser Application		Safari 3.0 or later

Network specifications of the projector

LAN Terminal

Data communication speed	100Base-TX (100Mbps)/10Base-T (10Mbps)
Protocol	TCP/IP

Wireless LAN

Interface	IEEE802.11b/g
Communication Mode	AdHoc, Infrastructure
Data Transfer Speed	1/2/5.5/11Mbps (IEEE802.11b) 6/9/12/18/24/36/48/54Mbps (IEEE802.11g)
Wireless Frequency (Channel)	2412MHz–2462MHz (CH1–CH11)
Modulation Form	IEEE802.11g OFDM 54/4Mbps 64QAM, 36/24Mbps 16QAM, 18/12Mbps QRSK, 9/6Mbps BPSK IEEE802.11b DSSS 11/5Mbps CCK, 2Mbps DQPSK, 1Mbps DBPSK
Protocol	TCP/IP
Security	WEP 64Bit (Open/Shared) /WEP 128Bit (Open/Shared), WPA-PSK(TKIP), WPA2-PSK(AES), SSID, ESSID
Service area	about 30 m (without disturbance) Differs according to the operating environment.

Compliance

Countries and Standards	JAPAN: VCCI ClassB,TELEC (Wireless)
	USA: FCC Part15 Subpart C (Wireless) FCC Part15 Subpart C, Class B
	Canada: IC RSS-210 (Wireless), IC ICES-003 ClassB
	Europe: R&TTE, EMC, LVD

Chapter 1

1. About LAN functions

This chapter describes the features, the mechanism, and connection procedures of the LAN.

LAN functions and the features

This product is loaded with a LAN network function which enables you to project an image on the computer through a projector via Network with dedicated software.
With the software, you can also manipulate the projecting image and the projector.
This software has functions below and you can use the projector under various network environments to meet the wide-ranging needs of the operation.

- Accept both Wired and Wireless LAN environment. When the projector is operated via Wireless LAN, there is no need for wire connection.
- One computer image can be projected up to 5 projectors simultaneously.
- Network capture function to project the computer's screen image through the projector.
- Remote function which allows you to operate the projector from a distance.
- Monitoring function for the projector operation.
- E-mail function which reports the operating status to your maintenance management.
- Multi control function which can operate multiple projectors (up to 100) simultaneously.

Image projecting system via LAN

The images are projected through an image capturing system which helps to project the faithful computer images. With this system, you can use the product under various application environments despite the differences of application software.

Flow of Image Transfer

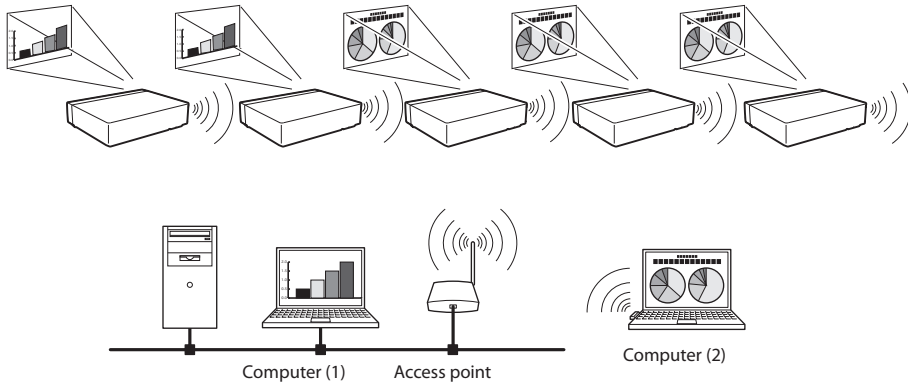
1. Download the computer image with the dedicated software faithfully to the real image.
2. The downloaded data will be compressed to the digital signal and transferred to the projector via the LAN (Wired or Wireless). (One computer can operate up to 5 projectors simultaneously.)
3. Digital signal will be reproduced into RGB image signal and will be projected by the projector.

✳ The image will be transferred to each projector. The time lag can occur between each projection.

CAUTION: This product does not correspond to the application with DirectX, MS-Office assistant, and video replay such as DVD.

An example of the connection

The illustration below shows an example of the projection via the LAN.
You can project the image on Computer (1) (Wired LAN connection), or Computer (2) (Wireless LAN connection) through the selected projector .

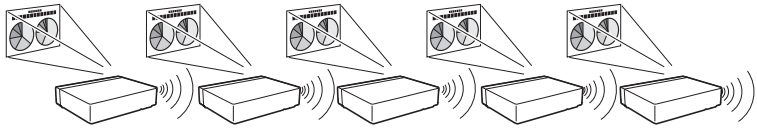


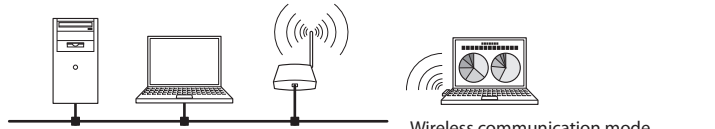
LAN connection modes

Connection modes differ depending on the LAN and computer environments.
Connect appropriately for each environment.

■ Wireless LAN, Infrastructure Communication Mode

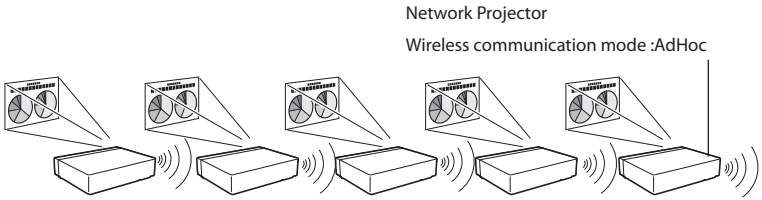
Communicate over an access point between Wired LAN equipment and Wireless LAN equipment. Or, communicate over an access point among multiple Wireless LAN equipment. Wireless LAN equipment will select an access point to communicate SSID/ESSID modes. These communication modes are used when both Wireless LAN and Wired LAN are used in the same network environment.





■ Wireless LAN, AdHoc Communication Mode

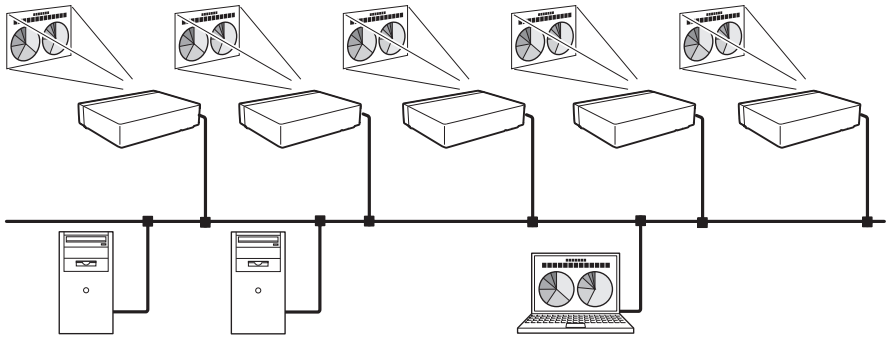
Communication mode between Wireless LAN equipment.
(Communication mode via SSID/ESSID)



Wireless communication mode corresponded
computer: AdHoc

■ Wired LAN Communication Mode

Communicate via the LAN line.



✳ Operate the computer mouse with the remote control.

When the projector's remote control employs mouse operating function, you can operate the computer by the remote control which is provided with the projector. To use the remote control, point to the projector. You do not need to connect the USB cable to operate the computer mouse.

(For details about the remote control operation, refer to the owner's manual of the projector.)

Chapter 2

2. Setup procedures

This chapter describes how to install the Network Capture 5 software and how to set up the networks.

To use the projector via the networks, follow the setup procedures below.

STEP 1 Install the software on computers.

Install the software recorded in CD-ROM on each computer which will be operated. Read following pages of this chapter to install.

STEP 2 Select Wired LAN or Wireless LAN then connect the LAN and set the configuration.

Decide depending on the LAN environment.

Wired LAN..... Refer to "4. Wired LAN Configurations" (pp.25–31).

Wireless LAN..... Refer to "5. Wireless LAN Configurations" (pp.33–42).

Detailed LAN configurations need to be done with a browser later.

First, complete the Wired or Wireless LAN connection between computers and projectors, then start browser configurations.

➔ "6. Basic setting and operation" (pp.43–62).

STEP 3 Network Configuration has completed.

Follow each chapter to project an image and operate the projector.

■ Operate and manage the projector ➔ "7. Controlling the projector" (pp.63-84)

➔ "Power control and status check" (p.64)

➔ "Controls" (p.66)

➔ "PC adjustment" (p.70)

➔ "Setting up the projector" (p.71)

➔ "Timer setting" (p.74)

➔ "Projector information" (p.77)

➔ "Multi-control" (p.79)

■ Project an image on the computer ➔ "8. Network capture functions" (pp.85-94)

➔ "Use of real time capture" (p.89)

Installing the software

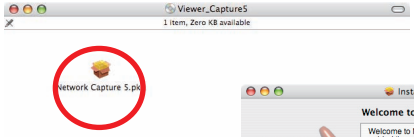
It is required to install the software into your computer to use the Network Capture function . Please install the software as follows.

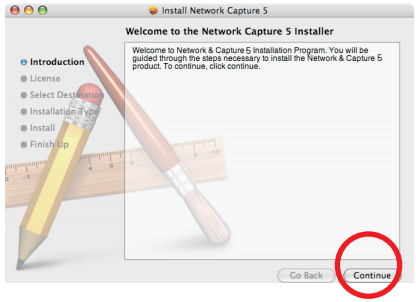
Note: To install the software into the computer, logon as an administrator. Before installation, make sure that the other applications are closed, otherwise proper installation cannot be made.

Network Capture 5 installation

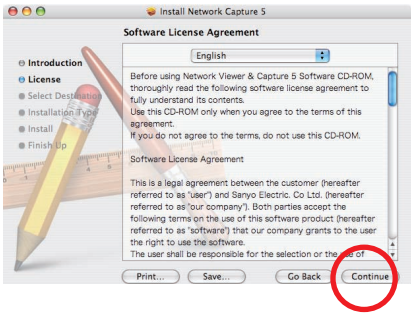
1 Set the supplied Network Capture 5 CD-ROM into the CD-ROM drive of your computer. Double click **Network Capture 5.pkg**.

2 Click **Continue** on the introduction screen.



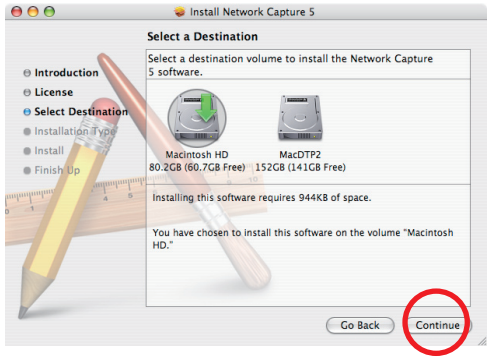

Install Network Capture 5
Welcome to the Network Capture 5 Installer
Introduction
License
Select Destination
Installation Type
Install
Finish Up
Welcome to Network & Capture 5 Installation Program. You will be guided through the steps necessary to install the Network & Capture 5 product. To continue, click continue.
Go Back
Continue

3 As the "License Agreement" will appear, read contents carefully, click **Continue** button and click **Agree** if you agree on the next screen to the license agreement to proceed with installing.

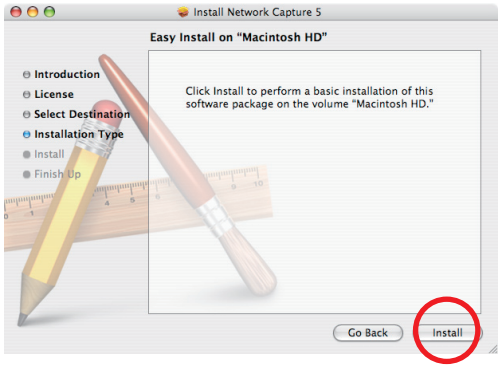

Install Network Capture 5
Software License Agreement
English
Introduction
License
Select Destination
Installation Type
Install
Finish Up
Before using Network Viewer & Capture 5 Software CD-ROM, thoroughly read the following software license agreement to fully understand its contents.
Use this CD-ROM only when you agree to the terms of this agreement.
If you do not agree to the terms, do not use this CD-ROM.
Software License Agreement
This is a legal agreement between the customer (hereafter referred to as "user") and Sanyo Electric. Co Ltd. (hereafter referred to as "our company"). Both parties accept the following terms on the use of this software product (hereafter referred to as "software") that our company grants to the user the right to use the software.
The user shall be responsible for the selection or the use of
Print...
Save...
Go Back
Continue

To continue installing the software, you must agree to the terms of the software license agreement.
Click Agree to continue or click Disagree to cancel the installation.
Disagree
Agree

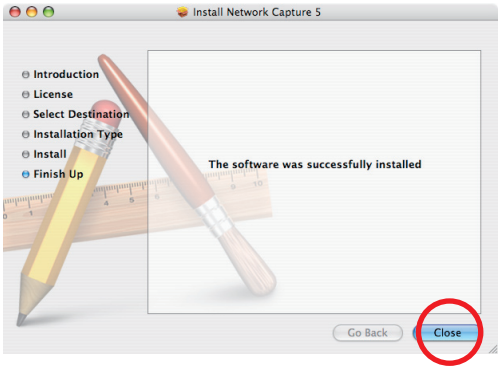
4 Select a Destination, and Click **Continue**.



5 Click **Install** to perform a basic installation.



6 Click **Close** to complete the installation.

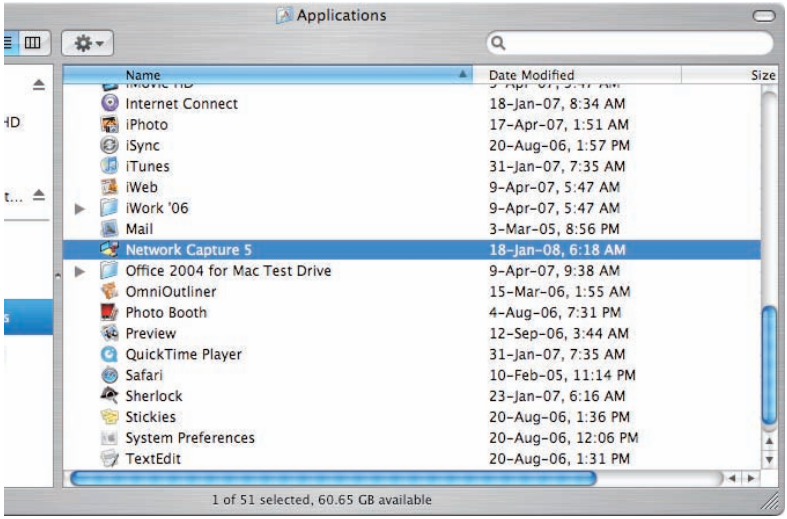


Installed software

The following software is installed on your computer.

● *Network Capture 5:*

Captures the displayed image of the computer and serves it to the projector via the network.


Applications
Name
Date Modified
Size
Internet Connect 18-Jan-07, 8:34 AM
iPhoto 17-Apr-07, 1:51 AM
iSync 20-Aug-06, 1:57 PM
iTunes 31-Jan-07, 7:35 AM
iWeb 9-Apr-07, 5:47 AM
iWork '06 9-Apr-07, 5:47 AM
Mail 3-Mar-05, 8:56 PM
Network Capture 5 18-Jan-08, 6:18 AM
Office 2004 for Mac Test Drive 9-Apr-07, 9:38 AM
OmniOutliner 15-Mar-06, 1:55 AM
Photo Booth 4-Aug-06, 7:31 PM
Preview 12-Sep-06, 3:44 AM
QuickTime Player 31-Jan-07, 7:35 AM
Safari 10-Feb-05, 11:14 PM
Sherlock 23-Jan-07, 6:16 AM
Stickies 20-Aug-06, 1:36 PM
System Preferences 20-Aug-06, 12:06 PM
TextEdit 20-Aug-06, 1:31 PM
1 of 51 selected, 60.65 GB available

* Move to Trash to uninstall this software.

Chapter 3

3. Names and functions of the operation screen

This chapter describes the functions of each part of the operation screen.

Network connection standby display

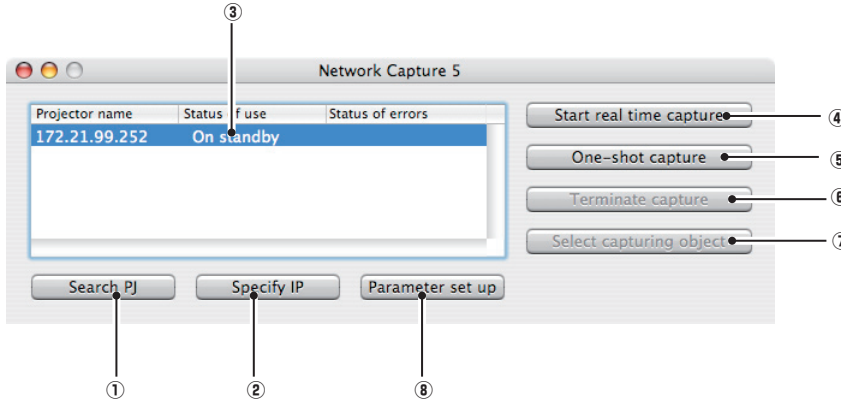
Turn on the projector and select either “Wired” or “Wireless” from the input menu of the projector. The “Please wait...” message will be displayed on the screen. After short time, the network connection standby display screen will appear as below. While the “Please wait...” message is shown, you cannot operate the projector.

Network Connection Standby Display

Network Capture 5 window

This software is to project the computer screen via the networks.

Click "Network Capture 5" from "Macintosh HD" --> "Application" -->"Network Capture 5" menu, then following screen will appear. Then the program will start.



Parts Names and Functions of the Screen

① Search PJ button
Search the projector connected to the networks.

② Specify IP button
When connected to a different segment network, the projector can not be retrieved automatically. In that case, press this button, and then, the "Search specified IP address" window appears, and enter the IP address directly to specify the projector.

③ Network Projector List
Display all the projectors connected to the networks.
Show unoccupied projector as “On standby” and occupied projector as “Real time capturing” or "In One-shot mode". The indication of the status of use with "#" indicates that your computer is now using the network capture function.
After double-clicking on a projector name, the web browser gets activated and the projector setup screen will be displayed.

④ Start real time capture button
Capture (Project) the computer screen in real time. After the execution of "Start real time capture", the application window disappears.

⑤ One-shot capture button
Copy and capture (project) the computer screen without modification. After the execution of One-shot capture, the application window disappears.

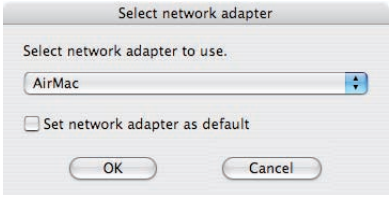
⑥ Terminate capture button
Terminate the real time capture and the One-shot capture.

⑦ Select capturing object button
It is possible to designate the window to capture individually. This button is disabled by default, so the full screen is captured. It is possible to change the capturing object function setting at parameter settings. For detail, refer to "Parameter set up" (p.88).

⑧ Parameter setup button
Activate the parameter setup window, and execute the connections setting and the image setting. For detail, refer to "Parameter set up" (p.88).

Using the multiple network adaptors

When your computer provides multiple network adaptors, the network adaptor selecting window will appear each time the Network Capture 5 software starts. Select a network adaptor and check the "Select a network adaptor as default" and then click OK. To change the setting, refer to the item "Parameter set up" (p.88).



Chapter 4

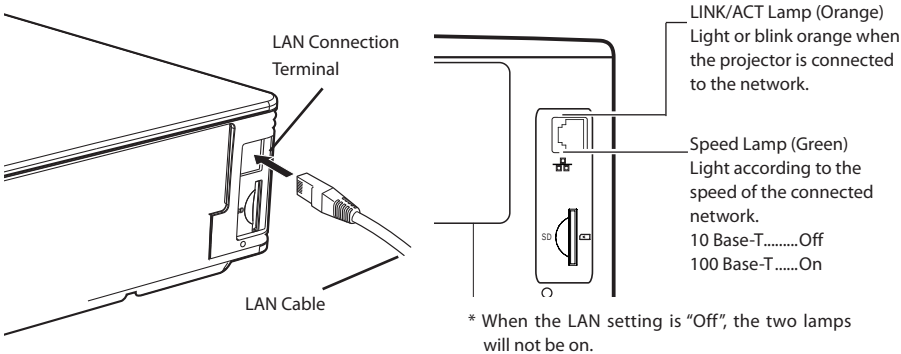
4. Wired LAN configurations

This chapter describes the preparation for Wired LAN setting with projectors and how to set the LAN environment.

Setting procedures and contents differ depending on the LAN installation location.
When installing, consult your system administrator to set up the LAN appropriately.

Connecting to the LAN line

Connect the LAN cable to the LAN connection terminal of the projector.


LAN Connection Terminal
LAN Cable
LINK/ACT Lamp (Orange)
Light or blink orange when the projector is connected to the network.
Speed Lamp (Green)
Light according to the speed of the connected network.
10 Base-T.....Off
100 Base-T.....On
SD

* When the LAN setting is "Off", the two lamps will not be on.

Network environment settings

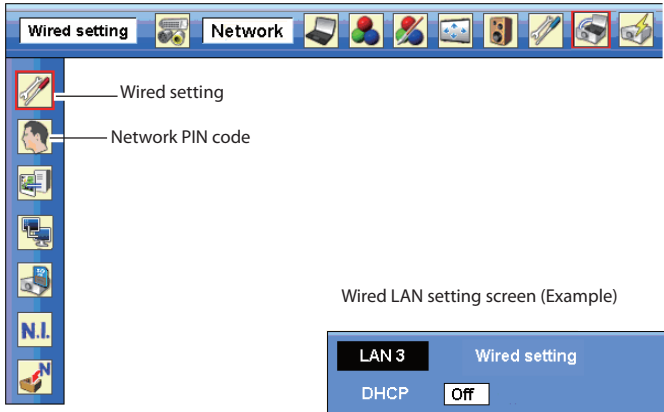
Set the Wired LAN network through the projector menu.
Detailed network settings will be made with browser. Refer to "6. Basic setting and operation" (p43-62).
First, complete the settings described in this chapter before performing steps in "6. Basic setting and operation."

Setting Procedure

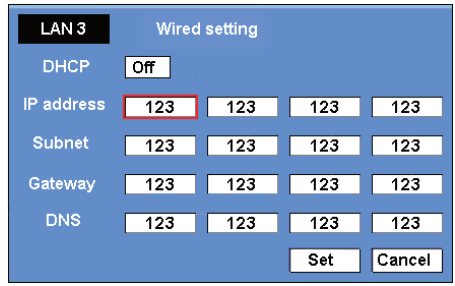
1. Turn on the projector and select "Wired" from the input menu of the projector.
   The projector's LINK/ACT Lamp will be on or blink. If the "Wired setting" is "Off", it will not be on. Follow step 2 and 3 to blink the lamp.
2. Select "Wired Setting" in the projector menu, and press **SELECT** button.
   Select similar LAN environment among LAN1, 2 and 3 with the Point ◀ ▶ buttons. (LAN1, 2, and 3 are the factory default setting environments. You can select three different environment among setting LAN1–3. For each setting, refer to the chart on page 31.)
   When selecting "Off" in the "Wired setting", the LAN connection will be cut off. Use the function when disconnecting the projector from the network.
3. Press the Point ◀ ▶ buttons then the "Please wait..." message will appear and switching operation will start. Switching will take a while and after completing the operation, the "Ready for use" message will appear. During the switching period, the projector cannot be operated.

26

4. Press **SELECT** button.
   LAN setting screen will appear and selected LAN settings will be displayed. Adjust each item to the setting environment. Consult your system administrator about the detailed settings.
   Adjust the figures with the Point ▲▼ buttons and move among the items with the Point ◀▶ buttons.
5. After completing all the settings, select "Set" and press **SELECT** button. Now, all procedures have been done. To cancel the adjusted settings, select "Cancel" and press **SELECT** button.
   To confirm whether the settings are correct, follow the procedures described from the next page.
   You can confirm the LAN settings you have made from "Network Information" (p.30). In such cases that the LAN cannot be connected, see this screen.



Wired LAN setting screen (Example)

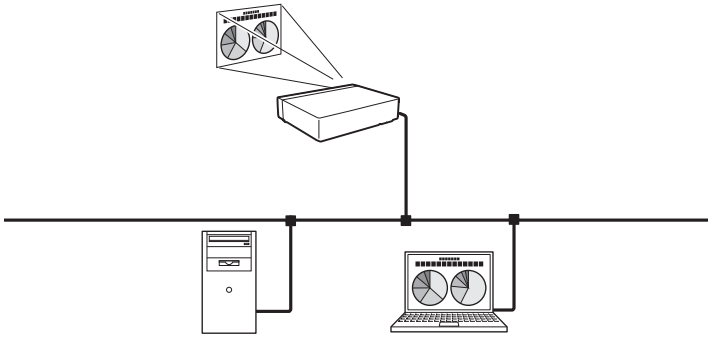


Item	Description
DHCP	Sets DHCP function On or Off. When you setup the network setting manually, select "Off". When it is set On, IP address, Subnet, Gateway and DNS are automatically set according to your network environment *1.
IP address	Sets IP address of the projector
Subnet	Sets Subnet mask. Normally sets 255.255.255.0
Gateway*2	Sets IP address of the default gateway (Router)
DNS*2	Sets IP address of the DNS server.

*1 Set "On" only when the DHCP server is available on your network environment.
*2 Set [255.255.255.255] if the network does not provide the gateway (router).
*3 Set [255.255.255.255] if you do not use the function E-mail alert.

Confirming the operation

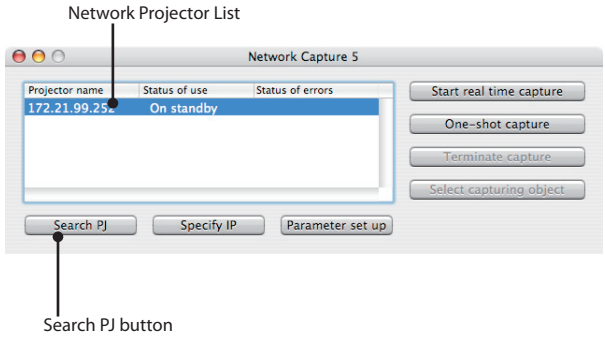
Confirm that the projector has connected to the LAN properly.



1. Activate "Network Capture 5" which is installed into the computer connected to the LAN .
2. After "Searching projector" message appears, the name of the projector* appears on the Network Projector List, then the network setting has completed properly.
   When the name of the projector does not appear and error screen appears, the network has not connected yet. Try searching again with the **Search PJ** button. If error screen appears again, reconfirm the LAN setting. When the projector is set in the location separated by the router, see next page.
   When Firewall function (Anti-virus software) is effective, network projector may not be found. In that case, disable the Firewall function and try searching again.

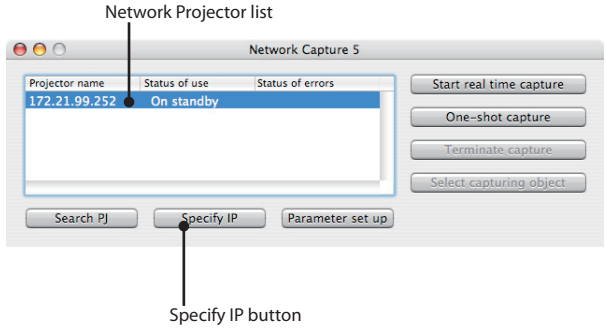
✳ If the projector is named, the name will be displayed. The name can be set with the following procedures in "6. Basic setting and operation" ➔ "Initial setting" (p48) . If the projector is not named, IP address of the projector will be displayed.

Network Capture screen



When set up the projector in the location separated by the router and the segment is different; Projector will not be found nor displayed. In that case, the projector needs to be searched directly by the IP address.

1. Press **Specify IP** button. The window below appears.
2. Enter the IP address of projector and Click **OK**. Then, the projector will be added on the Network Projector List of the application window.



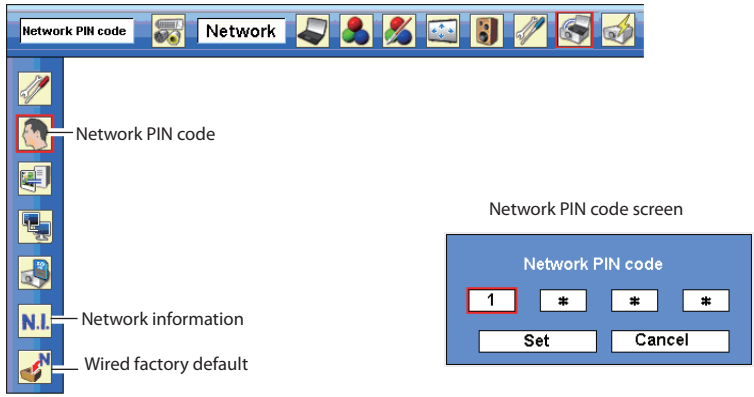
The window above appears.

Network PIN code

The Network PIN code is to restrict the access from the networks to the projector.
After setting the Network PIN code, you need to enter it to operate the projector via the networks.

1. Select Network PIN code menu, and press **SELECT** button.
   The Network PIN code screen will appear.
2. Set the Network PIN code.

Set the figures with the Point ▲▼ buttons and move to the next items with the Point ◀ ▶ buttons. Select "Set" and press **SELECT** button to set. To cancel the preset Network PIN code, select "Cancel". When you do not want to set the Network PIN code, set "0000".
It is recommended to set the Network PIN code if you use the projector via the networks. The Network PIN code can be set also through the networks. See "6. Basic setting and operation" ➔ "Initial setting" ➔ "Network PIN code setting" (p49).



Network information (See the menu above.)

Select Network information from the projector menu and press **SELECT** button to show LAN setting environment of the currently selected projector. (The description below is an example and different from what will be shown.)

Network information	
MAIN PROGRAM:	V1.000
MAC ADDRESS:	08007B650056
IP ADDRESS:	172.21.95.202

Wired factory default (See the menu above.)

Select "Wired factory default" from the projector menu and press **SELECT** button. All the wired LAN settings will go back to the factory default settings. For details, refer to "Wired LAN factory default settings" (p.31).

Wired LAN factory default settings

Parameter	SELECTED LAN		
	LAN1	LAN2	LAN3
IP ADDRESS	169.254.100.100	192.168.100.100	192.168.100.100
SUBNET MASK	255.255.0.0	255.255.255.0	255.255.255.0
GATEWAY ADDRESS	255.255.255.255	255.255.255.255	255.255.255.255
DNS ADDRESS	255.255.255.255	255.255.255.255	255.255.255.255
IP CONFIGURATION	MANUAL	DHCP	MANUAL

Chapter 5

5. Wireless LAN configurations

This chapter describes the preparation for Wireless LAN setting with projectors and how to set the LAN environment.
This projector contains the Wireless LAN module.

The setting procedures and configurations differ depending on the LAN installation location. Consult your system administrator for installation and set the LAN appropriately.

To operate via Wireless LAN, your computer has to be equipped with a Wireless LAN card adapter which supports IEEE 802.11b/g.

If connecting in Infrastructure mode with an access point, the access point is required to support IEEE 802.11b/g.

Caution: Do not use a mobile phone or PHS near (within 20cm/8inch) the projector. It may cause malfunction.

Note on Macintosh
Easy wireless setting function cannot be used with Macintosh.

Setting the network environment

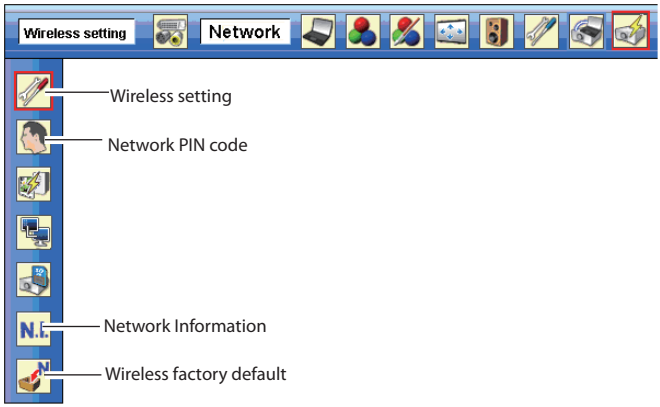
The projector contains the Wireless LAN adapter.
Set the Wireless LAN network through the projector menu.
Detailed network settings will be made with browser. Refer to "6. Basic setting and operation". ➔"Network configuration" (p.51). Complete the settings described in this chapter before performing the steps in "6. Basic setting and operation."

Setting procedures

1. Turn on the projector and select "Wireless" from the input menu of the projector. The "Please wait..." message will be displayed on the screen. After short time, the network connection standby display screen will appear. Refer to "3. Names and Functions of the Operation Screen" (p.21).
2. Select "Wireless Setting" from the projector menu and press **SELECT** button.
   Select similar environment between LAN 4 and LAN 5 with the Point ◀▶ buttons. (LAN 4, LAN 5, and SIMPLE* are factory default settings. Select similar environment to the installation location. For each settings, refer to "Wireless LAN factory default settings" on page 42.)

   ✳"SIMPLE" mode is Windows-compliant, but non-Mac-compliant.

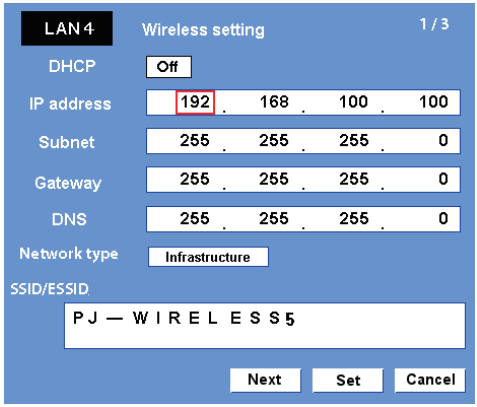
3. Press the Point button then the "Please wait..." message will appear and switching operation will start. Switching will take a while and after completing the operation the message will disappear. During the switching period, the projector cannot be operated.



4. Press **SELECT** button. LAN setting screen will appear and the selected LAN settings will be displayed. Adjust each item to the setting environment. Consult your system administrator for the detailed settings.
   Adjust the figures with the Point ▲▼ buttons and move among the items with the Point ◀▶ buttons. When the network type is "AdHoc", you do not have to change "Sub net" and "Gateway" and leave them as default settings.
   SSID/ESSID for the network type "Infrastructure" and "AdHoc" are required to be entered the same characters into the projector, the access point, and the Wireless LAN compatible computer (up to 32 characters). Characters can be selected from A~Z, a~z, blank (space), 0–9, or - (hyphen) with the Point ▲▼ buttons. Move to the next character with the Point ◀▶ buttons.
   You can confirm that the projector settings from "Network Information" in the projector menu (p.40).

5. After completing all the settings, select "Set" and press **SELECT** button. Now, all procedures have been done. To cancel the adjusted settings, select the "Cancel" and press **SELECT** button.
   To confirm whether the settings are correct, follow the procedures in "4. Wired LAN configurations" ➔ "Confirming the Operation" (p.28).

For configuring of WEP, WPA-PSK, WPA2-PSK security, select "Next". Refer to "Configuring security with the projector" on next page for details.



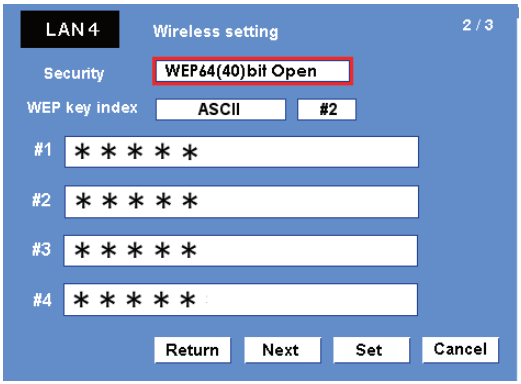
Item	Description
DHCP	Sets DHCP function On or Off. When you setup the network setting manually, select "Off". When its set On, IP address, Subnet, Gateway and DNS are automatically set according to your network environment *1.
IP address	Sets IP address of the projector
Subnet	Sets Subnet mask. Normally sets 255.255.255.0
Gateway*2	Sets IP address of the default gateway (Router)
DNS*2	Sets IP address of the DNS server. Must be set when the E-mail function is used.
Network type	Sets Infrastructure or AdHoc mode. When the "AdHoc" is selected, the security "WPA-PSK" and "WPA2-PSK" are not available.
SSID/ESSID	Identifier of the wireless access point.

*1 Set "On" only when the DHCP server is available on your network environment.
*2 Set [255.255.255.255] if the network does not provide the gateway (router).
*3 Set [255.255.255.255] if you do not use the function E-mail alert.

Configuring security with the projector

Configure security with the projector by following the steps below.
After configuring the network in "5. Wireless LAN Configurations" (p.33-42), select "Next" in the LAN setting screen and press **SELECT** button. The security configuration screen appears. Refer to "6. Basic setting and operation" ➔ "Configuring wireless LAN setting and security setting" (p.53) as well.

WEP configuration screen



Use the Point ▲▼ buttons to select the security type. To disable the security, select "Disable."
Use the Point ◀▶ buttons to move among the items; use the Point ▲▼ buttons to adjust settings.

This projector provides the following security options. Use optimum security option on your network environment.

- WEP64(40)bit Open
- WEP64(40)bit Share
- WEP128(104)bit Open
- WEP128(104)bit Share
- WPA-PSK(TKIP)
- WPA2-PSK(AES)

Notes when entering characters:
The "¥" symbol is displayed as "\" when the ASCII key is used. The "✻" symbol is treated as a character by the ASCII key, but it is not interpreted as a character by the HEX key. In HEX, the "✻" symbol is displayed in red and setting is denied.
You can not set all the characters with the "✻" symbol. This will be considered as no operation.

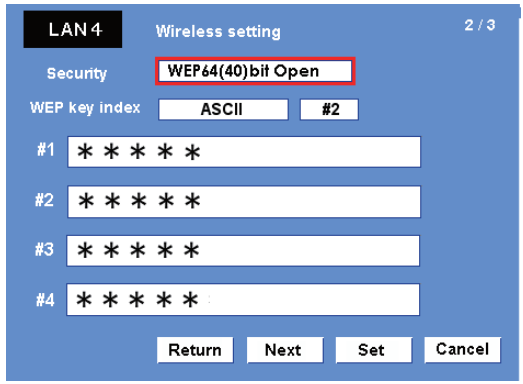
ASCII key characters : Space - 0 to 9 A to Z a to z ! " # $ % & ' ( ) * + , . / : ; < = > ? @ [¥] ^ _ ` { | } ~
HEX key characters : 0 to 9 a to f

Use of security type "WEP"

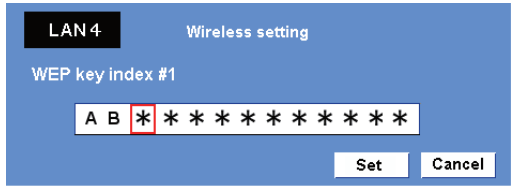
1. Use the Point ▲▼ buttons to select "WEP" security type.
2. Select "WEP Key index". Use the Point ▲▼ buttons to choose the HEX or ASCII key. The four (#1–#4) kinds of WEP keys can be configured. Use the Point ◀▶ buttons to move to the right frame; use the Point ▲▼ buttons to select a WEP key number (#1–#4).
   Refer the table below for the usable number of characters at the WEP security option.

WEP option	Characters
WEP64(40)bit ASCII	5 characters
WEP64(40)bit HEX	10 characters
WEP128(104)bit ASCII	13 characters
WEP128(104)bit HEX	26 characters

WEP configuration screen



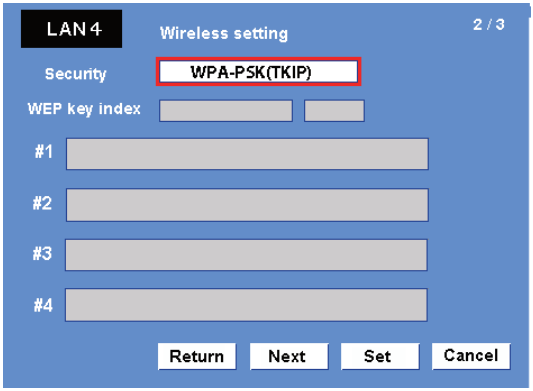
3. Use the Point ◀▶ buttons to select the Type field of the WEP key number that corresponds to the one you selected above and press **SELECT** button. The WEP key entry screen appears. In the WEP key entry field, all characters are displayed in "✻". Use the Point ▲▼ buttons to select a character; use the Point ◀▶ buttons to select a character position. Enter all the characters displayed with "✳".
   When you select HEX at WEP key index and the entry key contains "✻", the "✻" symbol is displayed in red and setting is denied.
4. Use the Point ◀▶ buttons to select "Set" and press **SELECT** button to return to the Wireless setting screen. Select "Set" in the Wireless setting screen to complete the network setting.



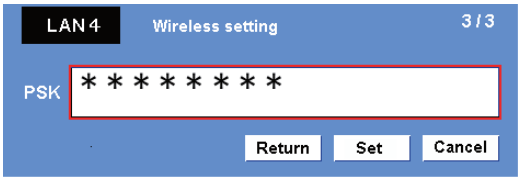
Use of security type "WPA-PSK", "WPA2-PSK"

1. Use the Point ▲▼ buttons to select "WPA-PSK" security type. WEP security setting fields are grayed out.

WPA-PSK configuration screen



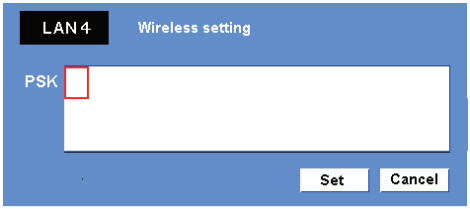
2. Select "Next" and press **SELECT** button. The PSK key confirmation screen appears.



3. Use the Point ◀▶ buttons to select the key field and press **SELECT** button. The PSK key entry screen appears. Enter the PSK key by using the Point buttons. If the input PSK key has an error, the PSK key is indicated in red.

Available PSK key characters

ASCII code.....8 to 63 digits
Hex code.....64 digits



4. Use the Point ◀▶ buttons to select "Set" and press **SELECT** button to return to the PSK confirmation screen. Select "Set" and press **SELECT** button to complete the PSK key setting and the Wireless setting screen appears. Select "Set" and press **SELECT** button to complete the network configuration.

* Security "WPA-PSK" and "WPA2-PSK" modes are not available when the "AdHoc" network type is selected.
* When you set the PSK keys with 64 digits, the projector checks whether all of the entered PSK keys are in Hex code or not. If any of the ASCII code is included in the entered PSK keys, the entered PSK keys are indicated in red as error.

Network PIN code

The Network PIN code is to restrict the access from the networks to the projector.
After setting the Network PIN code, you need to enter it to operate the projector via the networks. Select "Network PIN code" from the projector menu and press **SELECT** button. Set with the same procedures as setting Wired LAN Network PIN code. Refer to "4. Wired LAN Configurations" ➔ "Network PIN code" (p.30).

Network information

Display the current LAN connecting environment. Select "Network Information" from the projector menu and press **SELECT** button.

Wireless Information (Example)

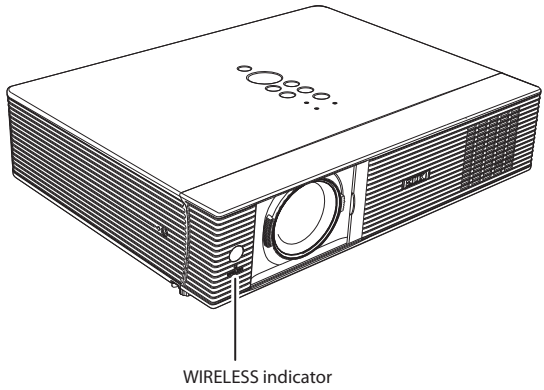
Network information	
MAIN PROGRAM:	V1.000
MAC ADDRESS:	08007B650056
IP ADDRESS:	169.254.53.0
WIRELESS MODE:	802.11b
NETWORK TYPE:	AdHoc
CHANNEL:	11
SSID/ESSID:	WIRELESS

Wireless factory default

Select "Wireless factory default" from the projector menu (p.34) and press **SELECT** button. All the wireless LAN settings will go back to the factory default settings. For details, refer to "Wireless LAN factory default settings" (p.41).

WIRELESS indicator display

When the wireless LAN configuration is set up correctly and the wireless communication is established with the access-point or the computer in the network, the WIRELESS indicator on the front panel lights up. While the projector scans the equipment in the network, the WIRELESS indicator blinks.



Wireless LAN factory default settings

Factory default settings for LAN4, LAN5, and SIMPLE * as follows.

✳"SIMPLE" mode is Windows-compliant, but non-Mac-compliant.

Setting Items	Selected LAN		
	LAN4	LAN5	SIMPLE *
IP ADDRESS	169.254.100.100	192.168.100.100	169.254. * . *
SUBNETMASK	255.255.0.0	255.255.255.0	255.255.0.0
GATEWAY ADDRESS	255.255.255.255	255.255.255.255	255.255.255.255
DNS ADDRESS	255.255.255.255	255.255.255.255	255.255.255.255
IP CONFIGURATION	MANUAL	DHCP	MANUAL
WIRELESS CHANNEL	11	11	11
NETWORK TYPE	802.11b AdHoc	INFRASTRUCTURE	802.11b AdHoc
WIRELESS SSID/ESSID (SSID/ESSID)	PJ-WIRELESS5	ANY	PJ-WIRELESS5
WEP (WEP encryption)	DISABLE	DISABLE	DISABLE
WPA-PSK (PSK key)	DISABLE	DISABLE	DISABLE
WPA2-PSK (PSK key)	DISABLE	DISABLE	DISABLE

Chapter 6

6. Basic setting and operation

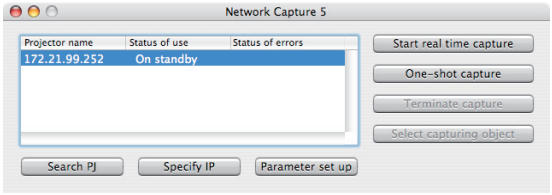
Describes basic operation and settings below by using the web browser.

- Initial setting
  Setup the basic setting such as Projector name, Network PIN code, Time setting, etc.
- Network setting
  Configure Wired/Wireless LAN environment.
- E-mail Setting
  Configure E-mail function to manage the projector.
- SNMP Setting
  Configure SNMP function to manage the projector.

Caution: When operating the projector with the browser, connect the projector to the computer with Wired or Wireless LAN. Complete the connection in advance.

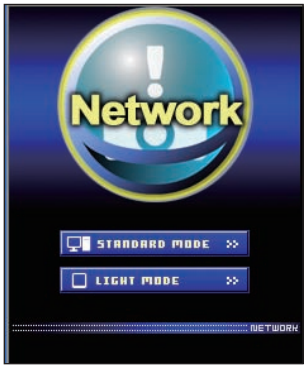
Starting up the Browser

1. Turn on the projector.
2. Start up the Network Capture 5. The Network Capture 5 searches projectors in the network and lists up the IP address or projector name of the projector on the Network Projector List.
3. Double click the projector to set from the Network Projector List.
4. The web browser will start up and display the setting page of the projector.



Select a display mode and login

This product provides 2 types of control mode, Standard Mode and Light Mode as below. Select a proper mode to match your PC and network environment by clicking on the text link. Once you select your desired display mode, the setting page you selected display mode will be displayed automatically from the next login. To change the display mode, click "Top" on lower-right corner of the setting page (p.45).



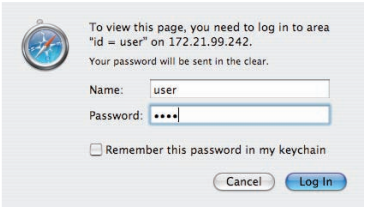
STANDARD MODE

For computer display, displays graphical menus and settings. This mode is recommended for standard use.

LIGHT MODE

Displays with 200 x 300 dots. This mode is optimized for use of the handheld computer, PDA, etc. It is also convenient if the network traffic is heavy. (This mode has some limitations on the multi-control functions.)

If the password has been set on the setting page, the authentication window will appear. In that case, type "user" onto the **User Name** text area and the login Network PIN code onto the **Password** text area and then click **Log in** button.


To view this page, you need to log in to area "id = user" on 172.21.99.242.
Your password will be sent in the clear.
Name: user
Password:
Remember this password in my keychain
Cancel
Log In

* The entered User Name must be "user" and it can not be changed.

[Note]
When the projector is accessed for the first time or the Network PIN code "0000" is set, the auto-login is performed and the next main setting page is displayed.

Display of main setting page

The following main setting page will be displayed depending on your display mode selection. Perform various kinds of settings through this page. Click on the menus to display the control and setting pages.

1 *Main setting page in the Standard Mode display*

Clock display
Display on or off by clicking text ON or OFF

Sub menu tab
Switches the sub menu tab.

Page numbers
Switches the pages by clicking the number's tab.

Main menu
For selection of control and setting items of the projector.

Setting page
Displays the control and setting items according to the selected menu.

Returns to Display Mode selection page (☞ p.44)

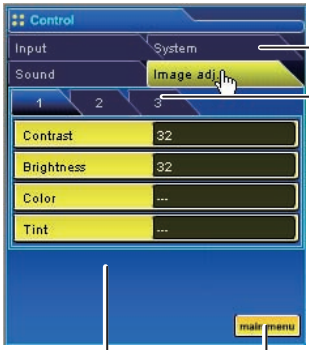
* To change the screen language, use the initial setting menu (p.48)

✎ **This Standard mode display is mainly used through this manual for the setting and control description.**

✎ If your computer does not have the Adobe Flash Player version 6 or later, follow the message on the control page to install the Adobe Flash Player. For further product information or installing, see the Adobe homepage.
http://www.adobe.com

TOP
In order to look at these movie,
you will need the Macromedia Flash Player installed on your PC.
If you do not have the Macromedia Flash Player plug-in installed on your PC,
Please download the latest version of this free player from Macromedia's website.
Get macromedia FLASH PLAYER

2 *Main setting page in the Light Mode display*



Sub menu tab

Page numbers

Returns to the display mode selection page.

Setting page

Returns to main menu

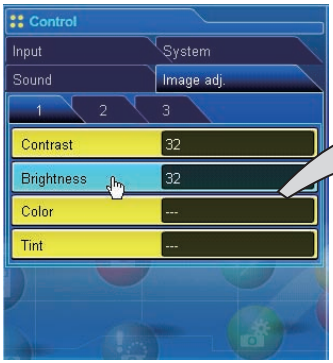
Main menu

✎ The blank page appears if your PDA does not provide a Adobe Flash Player. You need to install the Adobe Flash Player. (☞p.45)

How to use the setting page

To control and set up the projector, use the setting menus on the web browser. The basic operation and procedures commonly used on this manual are described below.

Example of the Setting Page



The setting pallet appears after clicking the item. Change the value by clicking ▲ or ▼ button, or type the number onto the text box directly and then click **Set** button.

* Each item has a valid setting range respectively.

Setting Pallet

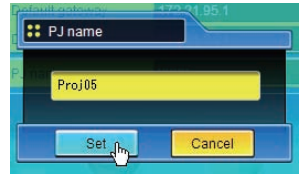
✎ The value in the text box indicates current value.

✎ Each item has a valid setting range. The setting value exceeding its range becomes invalid. Some control items can not be used depending on the selected input mode or functions of the projector you use. In that case, the values of those items are indicated with "---".

Type of the setting pallet

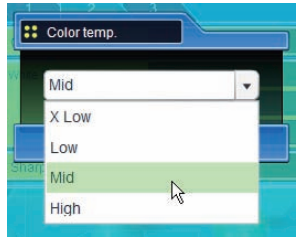
Text box setting

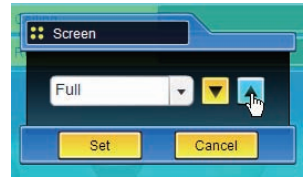
Enter the number or text and then click **Set** button.
or
Change a value with ▲ or ▼ button and then click **Set** button.
The value changes quickly when ▲ or ▼ button is kept pressing.



Pull-down menu setting

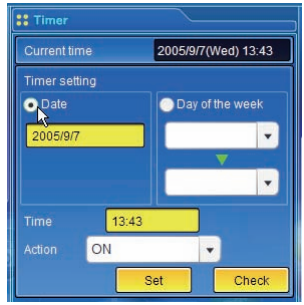
Select an item with pull-down menu button and then click **Set** button.
or
Select an item by clicking ▲ or ▼ button.





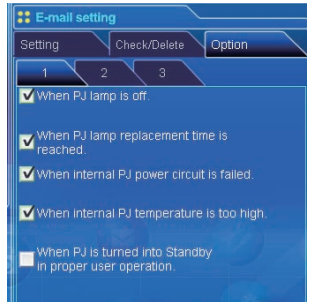
Radio button setting

Select an item by selecting a radio button



Check box setting

Select items by ticking on check boxes.

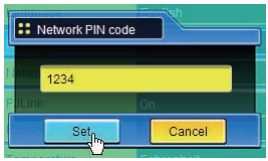


Initial setting

After installing the projector, perform the following basic initial setting.
Click **Initial Setting** on the main menu to display the initial setting page.

Item	Description
Language	Switches display language on the setting page. English or Japanese.
Model name	Indicates the model name of the projector.
Projector name	Sets the name of projector. This projector name is listed on the application window of the Network Capture software.
Network PIN code	Sets the Network PIN code to login the setting page (☞p.30, p.40)
PJLink	Switches PJLink password authentication on or off.
Password	Password for PJLink function

Network PIN code setting



This is to set the Network PIN code to restrict the access from an unauthorized person through the network.
Enter a 4-digit number as the Network PIN code onto the text box and click **Set** button.
The projector's network part begins restarting and it takes about 20 seconds. Close (Quit) the web browser and access to the login page again in 20 seconds. This is to perform the login authentication firmly.
The default Network PIN code as [0000], which means no Network PIN code is set.

- When you connect the projector to the network, it is recommended to set a new Network PIN code. Only a four-digit number is valid for the Network PIN code.
- If you forget the Network PIN code to the projector, you can check it by selecting "Network PIN code" sub menu from "Network" menu on the projector. For further information, please see item "Network PIN code setting" (☞p.30, p.40).

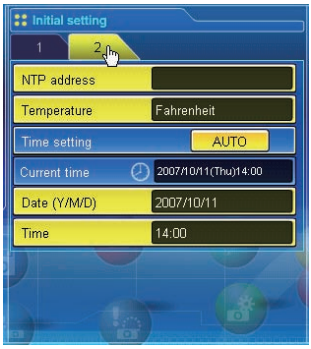
PJLink and password setting

This is to set the PJLink password authentication on or off. If "On" is set with the PJLink pull-down menu, the password must be required. Enter a **password*** onto the text box and click **Set** button.
Refer to the projector owner's manual for further details of the PJLink function.

- 1 to 32 alphanumeric characters can be used for the password.

What's PJLink?

The projectors equipped with PJLink function can be used together on the same network, regardless of model or brand, for centralized control and monitoring. This standard was established by the Japan Business Machine and Information System Industries Association (JBMIA). http://pjlink.jbmia.or.jp/



Item	Description
NTP address	Enter the address of NTP server. Please consult your network administrator for setting up of the NTP server.
Temperature	Switches display temperature unit Centigrade or Fahrenheit
Time setting	When clicking **AUTO** button, the date and time set on your computer are set to the projector. The timer icon appears when time is set up correctly.
Current time	Indicates current date and time set on the projector
Date	Sets date in manual
Time	Sets time in manual

Date and time setting

NTP is abbreviated expressions of Network Time Protocol. It is a protocol to acquire the exact current time via the network. This projector acquires the current time from the NTP server and update the time in the network module. After setting the NTP address, the projector acquires the time per 24 hours. If the projector fails acquiring the time from the NTP server, the projector tries to acquire the time every 1 hour until it succeeds.

When the NTP address is not set, perform the time setting with "Auto-setting" or "manual setting" described below.

Auto setting

Click **AUTO** button on the page, the date and time set on your computer are set to the projector.

Note:
Confirm that your computer has a correct clock time before performing the auto time setting.

Manual setting

Click the item **Date** or **Time** and enter the date or time on the input box with adequate format.

Date is in year/month/day format.

ex. 2007/10/05

Time is in 24-hour:minute format.

ex. 18:30

This projector does not provide the built-in battery. The date and time information are lost when the projector turns off (when "Eco" is set for the stand-by mode (Refer to p.72)), or the network configuration is reset, or the input mode "Wired" or "Wireless" is turned. The timer function is disable until time is set up correctly. When using the NTP address for time setting, the current time is acquired at the projector starting up and the timer function is activated after finishing the time setting correctly.

Network configuration

Click **Network** on the main menu. The following setting page is displayed. Set up the projector's network environment on this **Setting** sub menu.

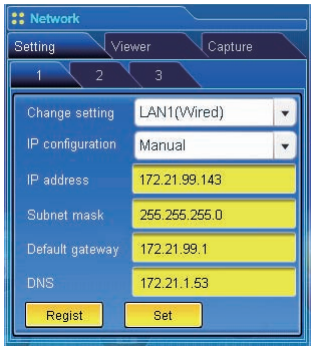
Setting of LAN

1. Select a type of LAN from **Change setting** pull down menu.
   LAN1(Wired)
   LAN2(Wired)
   LAN3(Wired)
   LAN4(Wireless)
   LAN5(Wireless)

   For the default setting of the above LAN, see the items "Factory Default Setting".

Item	Description
Change setting	Selects LAN1 to LAN5
IP configuration	Sets DHCP or Manual
IP address	Sets IP address of the projector
Subnet mask	Sets Subnet mask.
Default gateway*1	Sets IP address of the default gateway (Router)
DNS*2	Sets IP address of the DNS server.

*1 Set [255.255.255.255] if the network does not provide the gateway (router).
*2 Set [255.255.255.255] if you do not use the function E-mail alert.



2. Select either "Manual" or "DHCP" from **IP configuration** pull down menu. When "DHCP" is selected, IP address, Subnet mask, Default Gateway, DNS are automatically configured by DHCP function. Only the DNS address allows you to set up manually if the DNS address information is not provided on your DHCP server. When selecting "Manual", configure all the items manually. For further information, contact your network administrator. The address must be entered as 4 number groups separated by a dot like [192.168.001.101].
3. After completing the network configuration, press **Regist** button to register the network information.
4. To apply the setting, press Set button. The network of the projector starts re-booting and applies the setting. It takes about 20 seconds to complete. Close the web browser and access to the login page again in 20 seconds.

   On the screen of the projector, the "Please wait..." message will appear and switching operation will start. Switching will take a while and after completing the operation, the "Ready for use" message will appear. During the switching period, the projector cannot be operated.

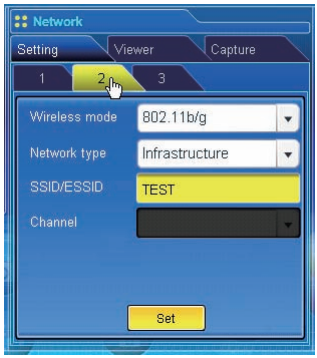
   When you use LAN4(wireless) or LAN5(Wireless), the setting items of page [2] and [3] are activated and you can setup Wireless LAN setting and Security setting. See the item "Configuring Wireless LAN Setting and Security Setting" for further setting.

Configuring wireless LAN setting and security setting

Configure the wireless LAN setting and security setting for LAN4 and LAN5.

Configuring wireless LAN setting

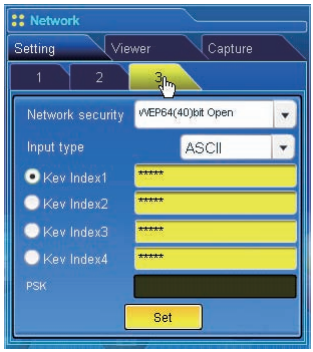
1. Click page [2] of setting pages. Following wireless LAN setting can be done. After completing the configuration, press **Set** button.



Item	Description
Wireless Mode	Select the Communication standard 802.11b or 802.11b/g
Network Type	Select either "Infrastructure" or "AdHoc". When selecting the "AdHoc", the security "WPA-PSK" and "WPA2-PSK" mode are not available.
SSID/ESSID	Set the SSID/ESSID. (up to ASCII 32 characters) SSID/ESSID is case-sensitive. Even though all characters on the Wireless information is uppercase, it is necessary to distinguish between upper case and lower case characters.
Channel	If you use the projector in 802.11AdHoc mode, select the channel, from 1 to 11.

Configuring wireless LAN security setting

Click page [3] of setting pages. Following wireless LAN security setting can be done. After completing the configuration, press **Set** button.



Item	Description

Network security ...Sets the type of encryption. Following types are available.
WEP64(40)bit Open
WEP64(40)bit Share
WEP128(104)bit Open
WEP128(104)bit Share
WPA-PSK(TKIP)
WPA2-PSK(AES)

Input type.....ASCII or HEX. See item "Notes for entering characters"

Key index1 - 4.....Enter keys of encryption.
The used number of character changes as the table below according to the type of WEP encryption and input type.

WEP option	Characters
WEP64(40)bit ASCII	5 characters
WEP64(40)bit HEX	10 characters
WEP128(104)bit ASCII	13 characters
WEP128(104)bit HEX	26 characters

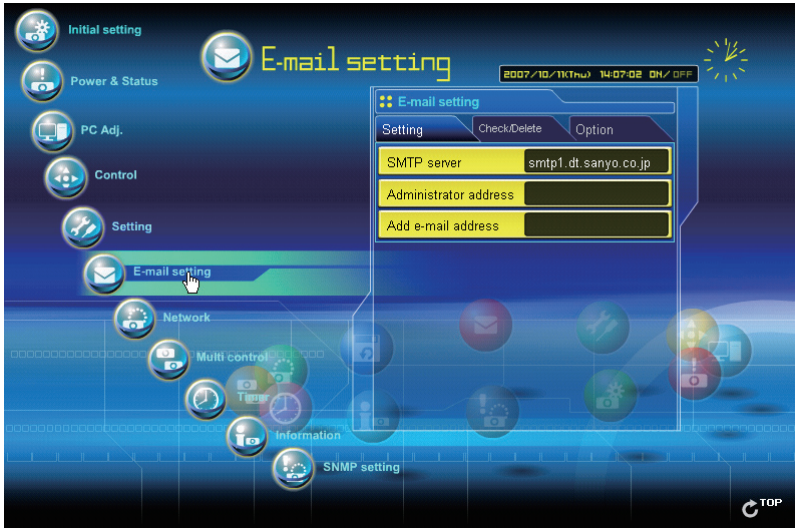
Four key indexes can be set, however, the only one with check on its radio button is effective. Both of the number and value of the key index in effect must be same as those of your computer and the access point.
Depending on computers and access points, you may be allowed to select only one WEP key. In that case, use key index1.

PSK.....Available when the "WPA-PSK(TKIP)" or "WPA2-PSK(AES)" is selected.
The PSK key must be no fewer than 8, nor more than 63 digits with ASCII code, and 64 digits with Hex code.

Notes for entering characters:
The "¥" symbol is displayed as "\" when the ASCII key is used. The "✻" symbol is treated as a character by the ASCII key, but it is not interpreted as a character by the HEX key. In HEX, the "✻" symbol is displayed in red and setting is denied.
You can not set all the characters with the "✻" symbol. It will be considered as no operation.
ASCII key characters : Space - 0 to 9 A to Z a to z ! " # $ % & ' ( ) * + , . / : ; < = > ? @ [¥] ^ _ ` { | } ~
HEX key characters : 0 to 9 a to f

E-mail setting

This product has an E-mail function which can send an alert message to users or an administrator if it detects an abnormality on the projector or run out of the life span of the lamp. Click **E-mail Setting** on the main menu and follow the below steps.



Item	Description
SMTP server*1	Sets server name or IP address of the SMTP server
Administrator address	Sets E-mail address of administrator
Add E-mail address	Sets E-mail address of the user to send a mail when the projector has an abnormality.

1 Setting SMTP server and administrator address

Set the server name or IP address of the SMTP server*1 and administrator address. The administrator address is set to "Reply-To" address of the message sent from the projector.

*1 The SMTP server is a server for sending E-mail. Please contact your network administrator to have this SMTP server address. When the server name for SMTP server is used, DNS must be set up to activate the E-mail function.(☞p.51)

- If the projector sends an alert message due to the abnormality on the projector but the SMTP server is down in some other reason, the message will not be sent. In that case, the message "Unable to connect to server." will be displayed on the setting page. To clear this message, set up SMTP server address again.
- To use the E-mail function, it must be set the DNS address on the Network setting page correctly.
- You cannot use this E-mail function if the DNS server and SMTP server cannot be used in your network environment.

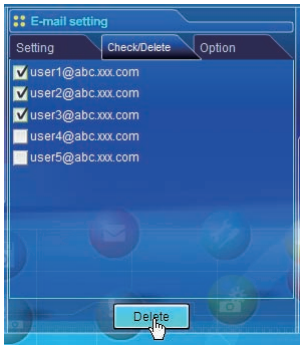
2 Registering and deleting E-mail addresses

Click "Add E-mail address" and type the E-mail address onto the text box and click **Set** button. To check the registered addresses, click **Check/Delete** sub menu tab. The addresses are listed as the figure on the right.

✐ Up to 10 E-mail addresses can be registered.

To delete the registered addresses, check the address you want to delete and click **Delete** button.

Check / Delete

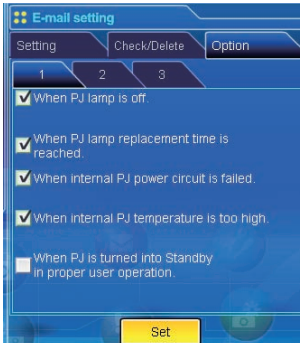


3 Option selection for sending alert mail

Click **Option** sub menu tab. Check the condition items under which alert mail will be sent and click **Set** button.

Please refer to the item "Examples :Type and contents of alert mail" described on the next page.

Option



[1]----------

- ❏ When PJ lamp is off.
- ❏ When PJ lamp replacement time is reached.
- ❏ When internal PJ power circuit is failed.
- ❏ When internal PJ temperature is too high.
- ❏ When PJ is turned into Standby in proper user operation.

[2]----------

- ❏ When accumulated filter use time reaches [ ] hours.
- ❏ When Power management function turns PJ lamp off.
- ❏ When the signal is interrupted.
- ❏ When Auto Play is failed.

[3]----------

- ❏ When lamp Corres. Value reaches [ ] hours.

Attached message

✐The length of message should be less than 255 characters.

✐ Up to 99,999 hours can be set for use time.

Examples: Type and contents of alert mail

When the projector has an abnormality, the following alert messages are sent to the registered E-mail address depending on your selected condition. Administrator or user can take an efficient action quickly by receiving this message. This is very useful to maintain and service the projector.
The following are examples of received messages.

● *When internal PJ temperature is too high:*

TITLE: Message from projector
10-03-2007 00:59
Projector Model Name: *model name*
TCP/IP: 192.168.1.201 Projector Name: Proj05

It sends you following message.

*The Projector lamp is turned off, because internal Projector temperature is too high.
Wait for the completion of the cooling process and make sure the projector has been turned into Standby. Then turn the projector on again.
If the Indicator continues flashing, check the air filter for dust accumulation.

[A] 81.5 degrees fahrenheit [B] 134 degrees fahrenheit [C] 95.6 degrees fahrenheit
Temperature of Sensor B is too high.

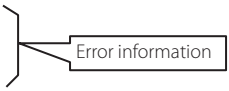
✎ The projector let users know the information which thermal sensors inside the projector detected the abnormal temperature risen and so the projector was turned off. Please refer to item "Power control and status check" (☞ p.64) for the location of the sensors and each temperature . Also see the owner's manual of the projector for further details.

● *When internal PJ power circuit is failed:*

TITLE: Message from projector
10-03-2007 00:59
Projector Model Name: *model name*
TCP/IP: 192.168.1.201 Projector Name: Proj05

It sends you following message.

*The Projector lamp is turned off, because Projector power circuit is failed.
Unplug the Projector from AC outlet and ask servicing to qualified service personnel.
MAIN, ALL OK
FAN, 5V OK
MCI, 3.3V NG



✎ The projector lamp was turned off, because the projector power circuit failed.
Unplug the projector from AC outlet and contact a qualified service personnel for service with the error information.

● *When PJ lamp replacement time is reached:*

TITLE: Message from projector
10-03-2007 00:59
Projector Model Name: *model name*
TCP/IP: 192.168.1.201 Projector Name: Proj05

It sends you following message.

*The PJ lamp replace time is reached.

✐ Replace it with a new lamp immediately and reset the lamp counter. If the projector is used without resetting the lamp counter, the alert mail is sent to users in every power-on of the projector. This alert mail will not be sent when the mail sending condition "When the life span of lamp is reached" is unchecked.

● *When lamp corres. value reaches preselect use time:*

TITLE: Message from projector
10-03-2007 00:59
Projector Model Name: *model name*
TCP/IP: 192.168.1.201 Projector Name: Proj05

It sends you following message.

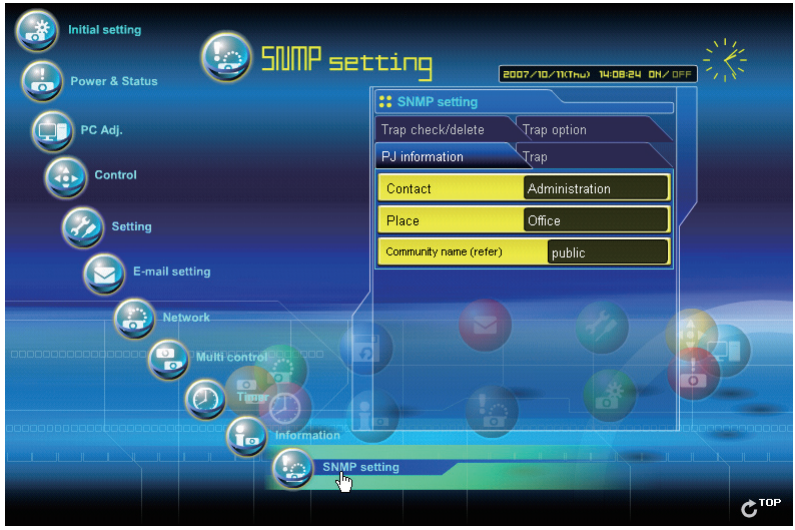
*The accumulated lamp use time reaches 1800 hours.
Prepare for the lamp replacement.

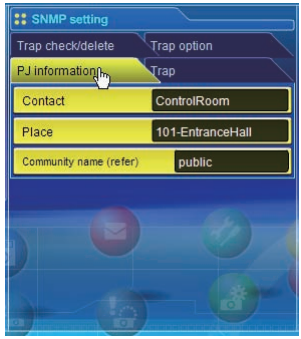
Discretional messages

✐ The projector sends a free message when the lamp use time (Corresponding value) reaches the preselected lamp use time. It can be used for preparation of the lamp replacement and the maintenance required.

SNMP setting

This product provides a SNMP (Simple Network Management Protocol) agent function. The SNMP consists of a manager and agents. The group which exchanges information with SNMP is called "Community". There are two access modes in a community, Refer (read only) and Set (read- write). This product allows to use Refer (read only) only. The SNMP message informs the projector status called "Trap" to an administrator. Click **SNMP Setting** on the main menu and set up each item.

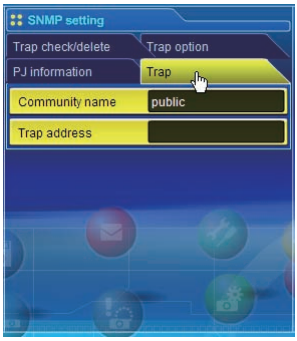




PJ information

Item	Description
Contact	Enter user name of the projector etc. (optional)
Place	Enter place of the projector (optional)
Community name(refer)	Enter community name (read only). Default name is "public".

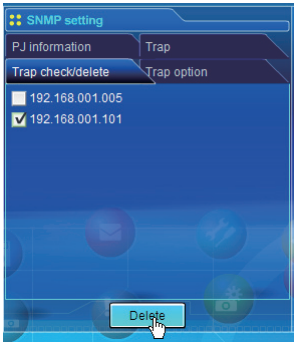
✎ The SNMP agent provided with this product is based upon MIB-2 defined by RFC1213. For private MIB information, refer to file "Mibinfo/XUPjNet.mib" in the CD-ROM.



Trap

Item	Description
Community name	Enter community name to send "Trap". Default name is "public".
Trap address	Enter IP address of the SNMP manager computer to receive "Trap". Up to 10 addresses can be registered.

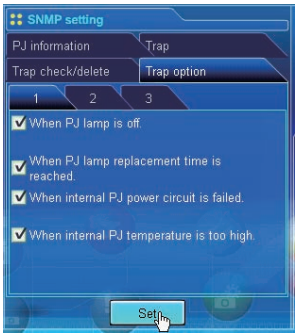
✎ Up to 10 trap addresses can be registered.



Trap check/delete

Check and delete the trap address

Checking the registered trap address and deleting the address.
To delete the address, tick the check box in front of the IP address and click **Delete** button.



Trap option

Trap option setting

Tick the check boxes in front of the condition item to send the trap.

✐ Click **Set** button if you tick or un-tick the check box on a page.

[1]----------
- ❏ When PJ lamp is off.
- ❏ When PJ lamp replacement time is reached.
- ❏ When internal PJ power circuit is failed.
- ❏ When internal PJ temperature is too high.

[2]----------
- ❏ When PJ is turned into Standby in proper user operation.
- ❏ When accumulated filter use time reaches [ ] hours.
- ❏ When Power management function turns PJ lamp off.

[3]----------
- ❏ When the signal is interrupted.
- ❏ When Auto Play is failed.
- ❏ When lamp Corres. Value reaches [ ] hours.

✐ Up to 99,999 hours can be set for the time setting.

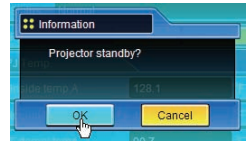
Chapter 7

7. Controlling the projector

Describes controlling and setting of the projector by using the web browser.

Power control and status check

Click **Power & Status** on the main menu. The control page will be displayed.
By clicking **ON** or **Standby** button on the page, the power of the projector can be controlled.



Popup confirmation window

Item	Description

PJ status

Power .....Displays the status of the lamp. (ON, OFF, On starting up, On cooling down)
Status .....Displays the status of the projector's power. (Refer to next page.)
Power control.....Controls the projector power by clicking the "ON" or "Standby" button.

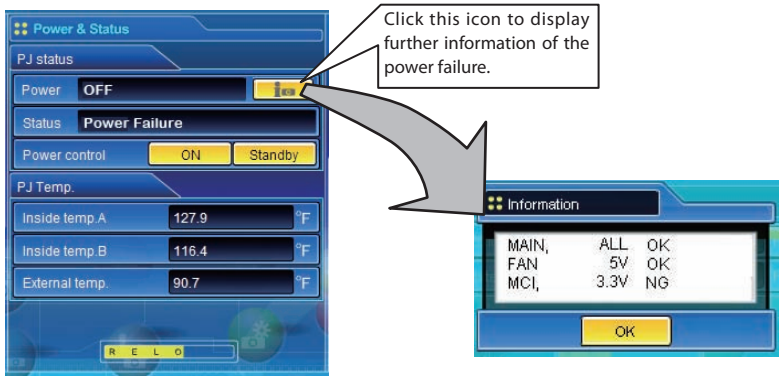
PJ temp.

Inside temp.A .....Displays the surrounding temperature of lamp in the projector.
Inside temp.B .....Displays the surrounding temperature of panel in the projector.
External temp. .....Displays the surrounding temperature of the intake vent.
⚠ .....The warning icon will appear if the temperature exceeds a specified value. Check if there is no object to obstruct the airflow around the intake or exhaust vent. It might be airfilter clogged. Replace the airfilter with new one.
* The temperature unit can be set either Centigrade or Fahrenheit in the item "Initial Setting". (☞p.50)

✎ The projector cannot be turned on while the projector is cooling down.
✎ The web browser checks and updates the projector's condition every 30 seconds automatically.

About projector condition

Status	Description
Normal	Projector is operating normally.
Power management in operation	Power management is operating
Lamp failure	Lamp failure is occurring
Abnormal Temperature	The temperature of the projector became too high
Cooling down after abnormal Temp.	Projector detects abnormal temp. and is cooling down itself.
Standby after Abnormal Temp.	Projector detects abnormal temp. and is set into standby mode.
Power failure	Power failure has occurred inside the projector. Projector is turned off. Unplug the AC cord and contact a qualified service personnel for service. If the power failure occurs on the projector, "Power failure" is indicated on the status column and the information icon appears on the power column as shown below. Click this icon to display further information of the power failure.



When a security (PIN code lock) has been set on the projector, you also cannot control it through the network. To control the projector through the network, unlock the security on the projector using with the projector's menu control.

Caution about turning on/off the projector via the networks

When turning on/off the projector via the networks, preset the projector as follows:

1. Select "Setting" from the Projector menu.

2. Select "Standby mode" from the Setting menu and set it as "Normal".

If you set this function as Normal, the network part of the projector is constantly provided with power even if the projector is turned off. If you set this as Eco, then the network part will be turned off when you turn off the projector. Consequently, you cannot turn on/off the projector via the networks.

Controls

Click **Control** on the main menu. The setting method differs depending on the contents of the page. Click on the page number to change pages and select desired setting items.

✎ **Please see the owner's manual of the projector to have the further information of each control item.**

Input

This function is to select the input mode and source mode of the projector. Click **Set** button after selecting the input and source mode.

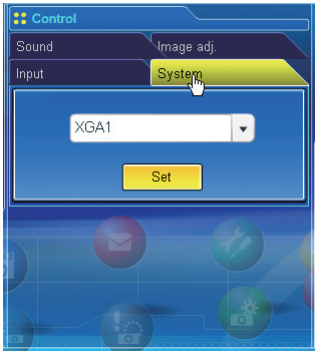
Item	Description	
Input	Selects input mode of the projector.	
Source	Selects signal source of the input.	
	Computer1 :	RGB(PC analog) RGB(PC digital) RGB(AV HDCP)
	Computer2 :	RGB Component RGB(Scart)
	Video :	Auto Video S-video
	Network:	Wired Wireless

✎ The control page displays valid control items depending on the selected input mode, signal or functions of the projector you use, therefore, there may be different controls between the described items and actual control items on the page display. For further information , refer to the projector's owner's manual.

✎ When the projector is standby, only the timer on the setting menu is available; others are not available.

System

This function is to select the system of signal input to the projector. The available system modes are listed on the pull-down menu button according to the input signal. Select a system and then click **Set** button.



Available selection at the RGB(PC analog) input

Item	Description
XGA1	It automatically switches to the proper computer system of the input signal. * The computer system modes (VGA, SVGA, XGA. SXGA, UXGA, WXGA...) which meet the input signal listed.

Available selection at the RGB(PC digital) input

Item	Description
D-XGA	It automatically switches to the proper computer system of the input signal. * The computer system modes (D-VGA, D-SVGA, D-XGA. D-SXGA1...) which meet the input signal listed.

Available selection at the Video/S-video/Scart input

Item	Description
AUTO	It automatically switches to the proper color system of the input signal. * The selectable color systems are PAL, SECAM, NTSC, NTSC4.43, PAL-M and PAL-N. * AUTO is fixed at the Scart input.

Available selection at the RGB(AV HDCP) input

Item	Description
AUTO	It automatically switches to the proper scanning system of the input signal. * The selectable scanning systems are D-480p, D-575p, D-720p, D-1035i and D-1080i.

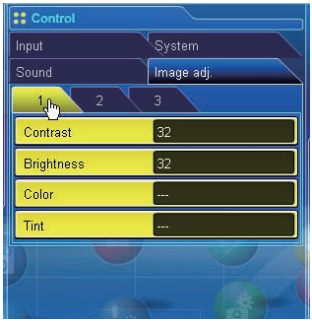
Available selection at the Component input

Item	Description
AUTO	It automatically switches to the proper scanning system of the input signal. * The selectable scanning systems are 480i, 575i, 480p, 575p, 720p, 1035i and 1080i.

✐ If the modes (Mode1 to Mode5) stored in the item "PC Adjustment" (☞ p.70) are available, they are also listed together with the above mode.

Image adjustment

This function is to adjust the projected picture image and save the image mode. To store the adjusted value, click **Store** button, and to load the adjusted value, click **Load** button.

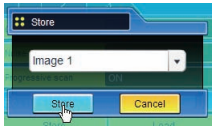


Item	Description
Contrast	Adjusts picture contrast
Brightness	Adjusts picture brightness
Color	Adjusts picture color saturation
Tint	Adjusts picture hue

Item	Description
Color temp.	Sets a color temperature mode.
White balance Red, Green, Blue	Adjusts each white balance respectively.
Sharpness	Adjusts picture sharpness.

* When the value of the white balance is changed, the color temp. indicates "Adj."

Item	Description
Gamma	Adjusts brightness of darker part of the picture.
Noise reduction	Switches noise reduction mode
Progressive	Switches progressive mode
Reset	Resets the Image adjustment to previous levels.
Store	Stores the Image adjustment values. Select an item [Image 1 - Image 4] from the pull-down menu and click **Store** button.



Load	Loads the Image mode. Select an image mode from the pull-down menu and click **Load** button. There may not be available mode depending on the input mode as shown in the table left.

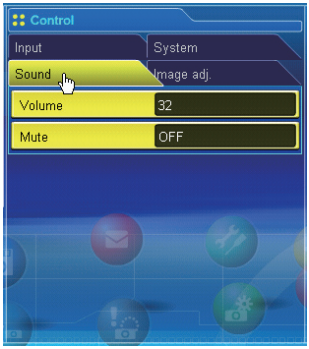
Input source

Image mode	Video	Computer
Dynamic	✔	✔
Standard	✔	✔
Real	*	✔
Cinema	✔	*
Blackboard(Green)	✔	✔
Image 1 - 4	✔	✔

✎ The mark "✔" indicates the available image mode in the selected input source. The error message appears when the disabled image mode indicated with "*" is selected.

Sound

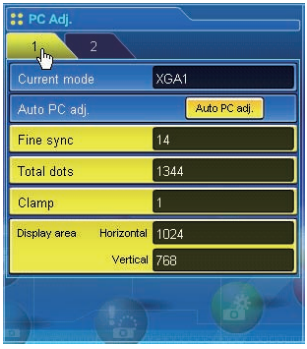
This function is to adjust the sound of the projector. The values in the text box represent the current control value or status.



Item	Description
Volume	Adjusts the sound volume from the speakers.
Mute	Suppresses the sound.

PC adjustment

Click **PC Adj.** on the main menu. This function is to adjust the signal from the computer connected to the projector to obtain the proper picture image on the screen.

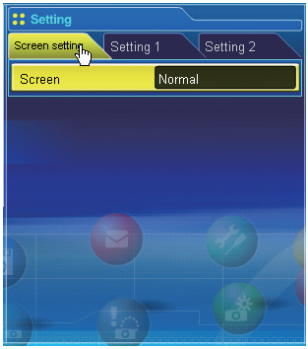


Item	Description
Current mode	Displays a current mode like VGA, SVGA, XGA, SXGA, UXGA, WXGA, etc. or MODE1 - MODE5 are the customized mode created by using the "Mode Store" function described below.
Auto PC adj.	Performs automatic adjustment.
Fine sync.	Performs Fine Sync adjustment.
Total dots	Adjust the number of total dots in the horizontal period.
Clamp	Adjusts the phase of the clamp.
Display area	
Horizontal	Adjusts the image area horizontally.
Vertical	Adjusts the image area vertically.

Item	Description
Position	
Horizontal	Adjusts the horizontal position of the screen.
Vertical	Adjusts the vertical position of the screen.
Reset	Resets the PC adjustments to the previous levels.
Mode Store	Stores the PC adjustment values. Select a mode no. [Mode1 - Mode5] from the pull-down menu.
Mode Free	Clear the PC adjustment values. Select a mode no. [Mode1 - Mode5] from the pull-down menu.

Setting up the projector

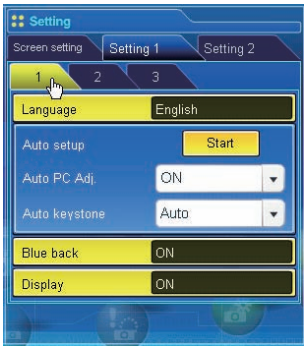
Click **Setting** on the main menu. This function is to set up the projector. Select the sub menu [Screen setting], [Setting 1] or , [Setting 2] and then set up each setting.



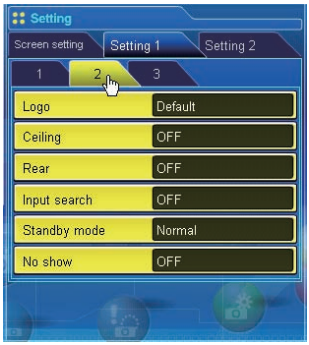
Item	Description
Screen	Switches the screen mode. There may not be available mode depending on the input mode as shown in the table below.

Input source		
Screen mode	Video	Computer
Normal	✔	✔
True	*	✔
Wide	✔	✔
Full	*	✔
Custom	✔	✔

✎ The mark "✔" indicates the available screen mode in the selected input source system. The error message appears when the disabled screen mode indicated with "*" is selected.

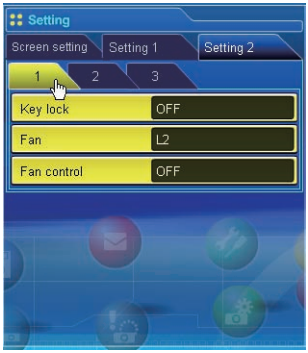


Item	Description
Language	Sets the language display of projector's on-screen display menu.
Auto setup	Executes the Auto PC Adj, and Auto Keystone function below according to the each setting after clicking **Start** button.
Auto PC Adj.	Sets Auto PC Adjustment mode.
Auto Keystone	Sets Auto Keystone mode.
Blue back	Sets the blue screen background when no signal input.
Display	Switches on or off the on-screen menu display on the screen. Countdown off .... Displays image during the starting up.



Item	Description
Logo	Sets the logo display on the screen during the startup.
Ceiling	Sets the image top/bottom and left/right reversed.
Rear	Sets the image left/right reversed.
Input search	Sets the auto-input signal detection mode.
Standby mode	Sets the network function enable or disable in the standby mode. Normal.....Enable Eco .....Disable
No show	Sets the black out image temporarily.

Item	Description
Freeze	Sets the image to freeze mode.
Power management	Sets into the selected power management mode if the input signal is interrupted and no control key is pressed for the specified period of time. *The specified time can be set 1 to 30 min.
On start	Sets the power-on mode when the AC cord is connected to the outlet.
Lamp control	Selects lamp control mode.
Pointer	Sets the pointer form.
Remote control	Sets the remote control code.



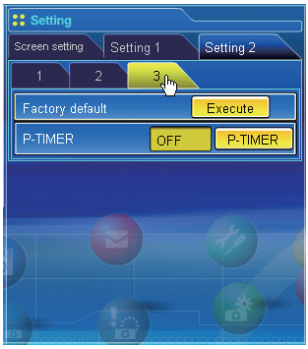
Item	Description
Key lock	Sets the prohibition of controls either Projector or Remote control.
Fan	Sets the cooling options after turning off. L1 Normal cooling L2 Silent cooling
Fan control	Sets the fan control speed. On1 Normal mode On2 Highland mode On3 Upward projection mode

Item	Description
Lamp counter	Displays the lamp use time (Corresponding value) . Reset the time after the lamp is replaced.

Lamp counter resetting

1. Select a Lamp radio button and then click **Reset** button.
2. Click **OK** button to execute the reset.

Filter counter	Displays the filter use time. Reset the time after filter replaced.
Filter warning	Sets the time to indicate the filter replacement message on the screen.

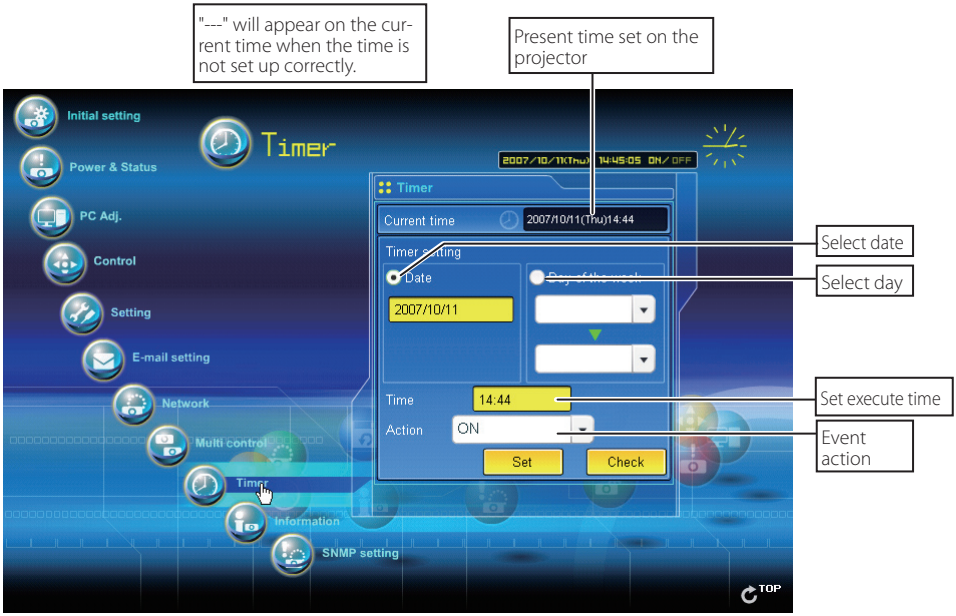


Item	Description
Factory default	Sets all of the projector control items to the factory default setting except the following items. Lamp Corres. Value, PJ time, Filter time, PIN code lock and Logo PIN code lock.
P-TIMER	Switches the P-TIMER display. ON ..... Starts P-TIMER indication STOP ..... Stops P-TIMER counting OFF ..... Stops P-TIMER indication

Timer setting

This page is to set the timer to turn the projector off or on at a programmed day/date and time. Follow the steps below for setting.

Click **Timer** on the main menu.



How to set the timer

1 Set a day or date

To set the timer event at the same time everyday or every week,

select **day** entry with radio button and then select desired day from the pull-down menu button. The selectable days are as follows:

- Same time everyday **- Every week (days from Monday to Sunday)**

To set the timer event on specified date,

select **date** entry with radio button and then type the date with (Year/Month/Date) format.

Ex.: Type [2007/12/20] if you specify [December 20, 2007].

This projector does not provide the built-in battery. The date and time information are lost when the projector turns off (when "Eco" is set for the stand-by mode (Refer to p.72)), or the network configuration is reset, or the input mode "Wired" or "Wireless" is turned. The timer function is disabled until time is set up correctly. When using the NTP address for time setting, the current time is acquired at the projector starting up and the timer function is activated after finishing the time setting correctly.

2 Set an execute time

Type the time with (Hour:Minute) and 24 hours format.

Ex.: Type [18:25] if you specify [PM 6 o'clock and 25 minutes].

3 Select an event action

Select an event action from the pull-down menu.

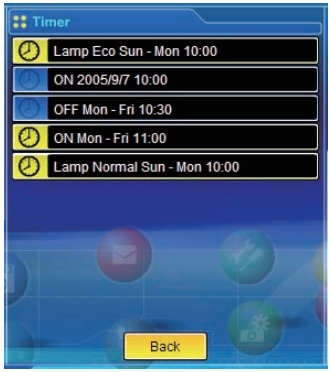
Event	Action
ON	Turns on the projector
OFF	Turns off the projector
Lamp Auto	Changes lamp mode to "Auto"
Lamp High	Changes lamp mode to "High"
Lamp Normal	Changes lamp mode to "Normal"
Lamp Eco	Changes lamp mode to "Eco"

4 Register an event

Click **Set** button to register the set timer event. Repeat steps 1 to 4 for another timer event setting.

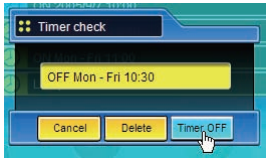
Check the timer events

To check the set timer events, click **Check** button. The timer events are listed. The event with blue background color represents the timer-OFF event.



Change the event mode

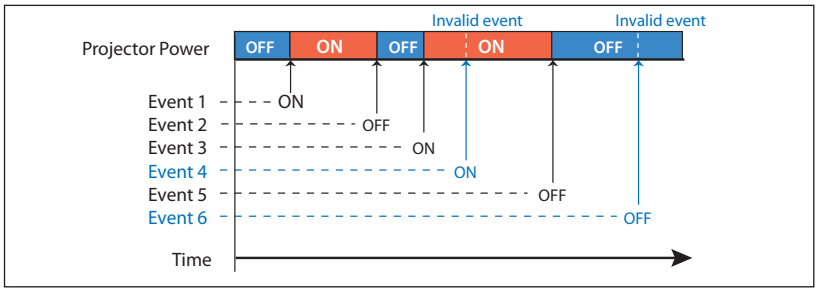
On the event list appearing by clicking **Check** button, click on the event you want to delete, disable or enable. Click **Cancel**, **Delete**, **Timer ON** or **Timer OFF** button on the popup pallet.



Button	Operation
Cancel	Cancels the setting
Delete	Deletes the timer event
Timer OFF	Disable the timer event temporarily
Timer ON	Enable the timer event

Notes on timer setting

✎ Up to 10 timer events can be registered. Timer events always operate according to the next valid event depending on the projector's power status. In the example below, event 3 turns on the projector so next event 4 (also turning on projector) will not be effective because the projector is already turned on. Similarly, when the projector is turned off by event 5, event 6 OFF will not be effective in turning it off again. But these secondary events (event 4 and event 6) will become effective if a person turns off the projector (after event 3 and before event 4) or turns on the projector (after event 5 and before event 6).



✎ When the timer events are set at the same time, the last event set will override the previous events. For example, if there is an event like "ON at 8:00 everyday" and then new event is set like "OFF at 8:00 everyday", only the last setting event is effective.

✎ When the timer event **ON** occurs during cooling down period, this is invalid event because the projector cannot be turned on during that cooling down period.

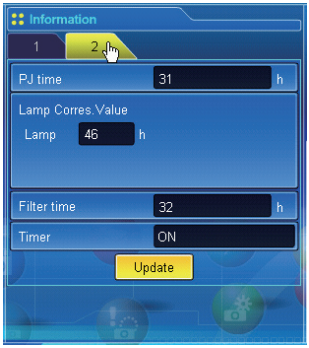
Projector information

This page is to display the basic information of the projector status. Click **Information** on the main menu.

Items	Description
Input	Displays selected input and source.
System	Displays selected signal system.
Signal	Input signal status
Screen	Displays screen mode.
Lamp status	Displays lamp status with an animation. Refer to the table on the next page.
Security	Displays the security (PIN code lock) status

Indication of the lamp status

Icon display/background	Status
White-Yellow/Blue	Lamp on (Normal)
White-Yellow/Red	Lamp on (Lamp is being used over a specified use time, replace lamp immediately)
Gray/Blue	Lamp off (Normal)
Gray/Red	Lamp off (Lamp is being used over a specified use time, replace lamp immediately)
Red/Blue with X	Lamp failure (Lamp failure, check the lamp condition)
Red/Red with X	Lamp failure (Lamp failure and lamp is being used over a specified use time, replace the lamp immediately)



Items	Description
PJ time	Displays the accumulated use time of the projector.
Lamp Corres. Value	Displays the use time (Corresponding value) of the lamp.
Filter time	Displays the use time of the filter.
Timer	Displays the timer setting status. ON Timer has been set. OFF No timer setting.

Multi-control

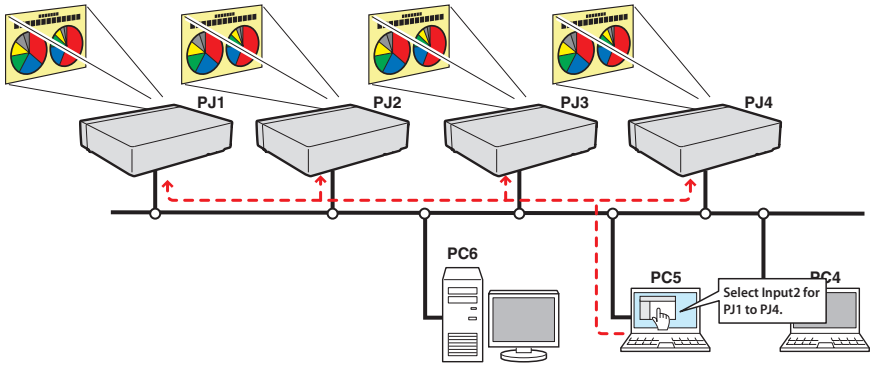
Controlling and setting the multi-projectors

When you install multiple projectors in the network, you can control and set up them together. Click **Multi Control** on the main menu to display the control page.

Note:

To control the multiple projectors, each projector must be set the same Network PIN code.

Example of multi control



Start/stop the multi control

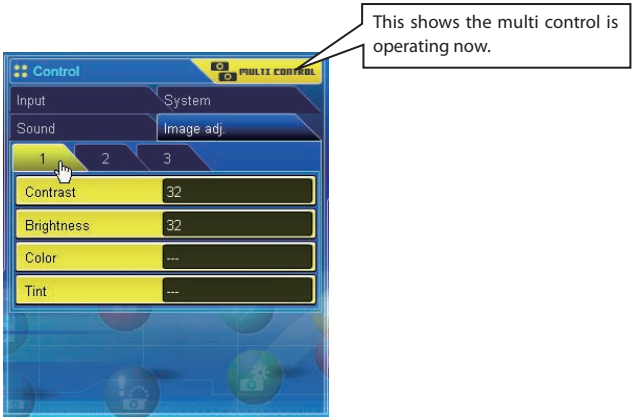
To start or stop controlling the multi-projectors, click Multi control setting menu and select ON or OFF.

Multi control setting

OFF.....Stops multi control function
ON.....Starts multi control function. The multi control menu will appear when ON is set. These items of menu are linked to the main menu.

The multi controllable menus are "Power & Status", "PC adjustment", "Control", "Setting", "E-mail setting", "Timer", and "SNMP setting". Click each menu and perform setting and adjustment.

✐ The word "MULTI CONTROL" appears on the each control page while the multi control is operating.



Register the projector

To use the multi control function, register the IP address of the projector you intend to control. Click **PJ registration** sub menu tab and set the IP address, Memo and Multi control item, then click **Set** button.

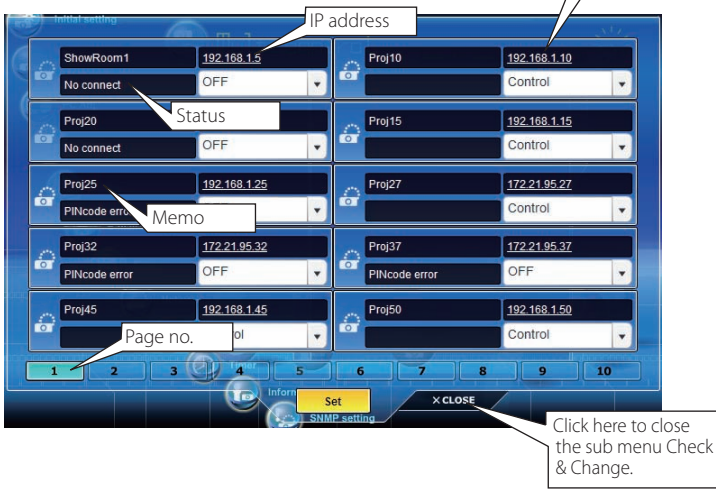
Items	Description
IP address	Enter IP address of the projector to control
Memo	Enter projector name or installed location etc.
Multi control item	
Control	Controlling the projector
Control & Image	Controlling and displaying images
Image	Displaying the images

Confirmation of registered projector

To check the registered information, click **Check & Change** sub menu tab. The registered information of the projector is listed as the below.

* The word "none" is displayed if the "Memo" function is used.

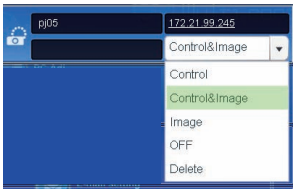
* When you click on a listed IP address, the login page for the selected projector will be displayed with a new window.



10 projectors can be registered per page and up to 100 sets can be registered for the multi-control.

Change the mode of the registered projector

To change the mode of the registered projector, select a mode with the pull-down menu button under the IP address of the target projector and then click **Set** button.

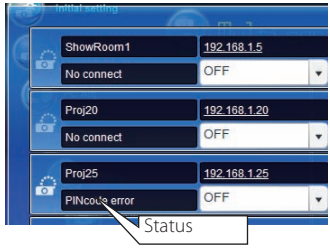


Mode	Operation
Control	Controlling the projector
Control & Image	Controlling and displaying images
Image	Displaying the images
OFF	Excluding from the multi-control
Delete	Deleting from the multi-control

* The multi control item is not available with the light mode.

Status

If some of the registered projectors are disabled by some reasons (such as disconnecting the power source, disconnecting the LAN cable, disconnecting from the network), control changes will continue to be effective for the projectors that are still active. At the same time, the deactivated projectors are excluded from the multi-control. The status of the registered projectors are indicated under the projector name. See the table below for status indications.

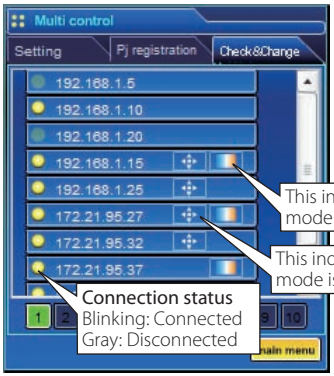


Status	Description
(blank)	The projector is connected to the network correctly
No connect	The projector may not be connected to the network. Please check the connection and network configuration of this projector.
PIN code error	The PIN code is incorrect. The PIN code for the multi-controlled projectors must be the same. Change the PIN code of this projector to the common PIN code. (p.30, p.40)
File Error	Not displaying the images. Check if this projector is using the Network Capture function, or in the standby mode.

* The projector updates the status at the time when the multi-control function is executed.

- If the multi-controlled projector is in the standby mode, items of "PC adj.", "Control" and "Setting" cannot be operated.
- It is recommended that a specified projector should be chosen for setting as a master when you use this multi-control function. The control for the multi-controlled projectors will become too complicated operation if this function is used for each projector.
- If the registered projector is not connected to the network, it will take a while to complete the multi-control operation because of waiting for the response from each registered projector.
- There are some disabled items in the multi-control function for the light mode.

Check & Change page in the light mode



(Check & Change page in the light mode)

Following functions in the "Check & Change" page are not available in the light mode.

- Changing the control mode.
- Deleting the registered IP address
- Indicating the each status
- Indicating the each memo

Controlling all together

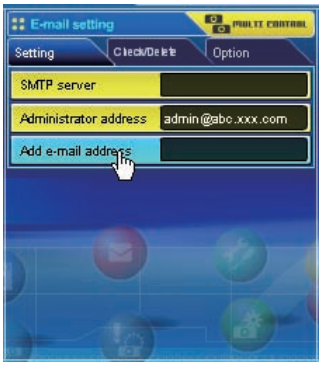
"Power & Status", "PC adjustment", "Control" and "Setting" can be controlled all together. Set "ON" the multi control setting and adjust controls of each menu. The setting value is applied to the registered projectors sequentially .

✐ This is effective only if the multi control item of the registered projector is set to either "Control & Image" or "Control".

Setting all together

"E-mail setting", "SNMP setting" and "Timer" can be set all together. Set "ON" the multi control setting and items of each menu. The setting value is applied to the registered projectors sequentially.

✐ This is effective only if the multi control item of the registered projector is set to either "Control & Image" or "Control".



Chapter 8

8. Network capture functions

Network Capture is a function to display the screen image of the computer via the network.

- Real Time Capture

About Network Capture function

The Network Capture is a function to display the screen image of the computer which has a Network Capture 5 software by the projector through the network. This function has a mode as below.

- Real Time Capture (☞p.89)

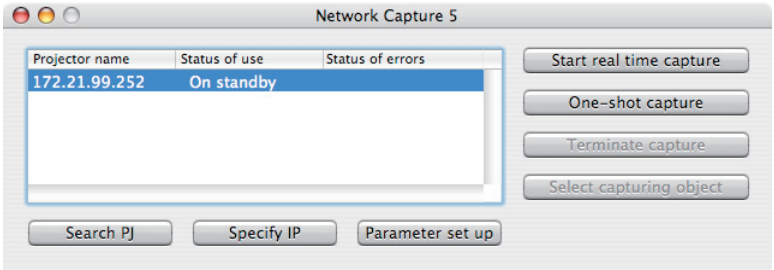
A function to display the screen image of the computer by the projector through the network in real time.

✐ Up to 30 computers can be registered.

Start up the Network Capture 5

To start up the Network Capture 5, click "Network Capture 5" from "Macintosh HD" - "Application" - "Network Capture 5" menu. The application window will appear and search the projectors in the network and list them on the projector list.
If any projector is not listed, check followings and then search again by pressing **Search PJ** button.

- Is the projector turning on and connected to the network?
- Is the network setting of projector and computer configuring correct?
- Is the same capture port no. used among computer and projectors?



Commands on the menu bar

When the **Network Capture 5** icon on the menu bar is clicked, the popup menu will appear. It provides according to the operating modes as shown in the table below.

Network Capture activating

- Parameter set up...
- Window show..
- Version information..
- Shut down

Menu during Real time capturing

One-shot executing

- Start real time capture
- One-shot capture
- Terminate capture
- Window show..
- Version information..
- Shut down

Real time capture executing

- One-shot capture
- Terminate capture
- Window show..
- Version information..
- Shut down

Items	Description
Start real time / Terminate capture	Starts / Terminates the real time capturing. (☞p.89) The screen image of the computer is projected on the screen in real time.
One-shot capture	Transfers the one-shot screen image of the computer.
Select capture object*	Sets to display the capture window selection dialog. * This menu will appear when "Select capturing object" is checked on the parameter setting. (p.88)
Parameter set up	Sets the communication parameter between the computer and projector. For further information, see item "Parameter set up" on the next page.
Window show	Displays the application window on the screen.
Version information	Displays the version of this software.
Shut down	Quits the Network Capture 5 application.

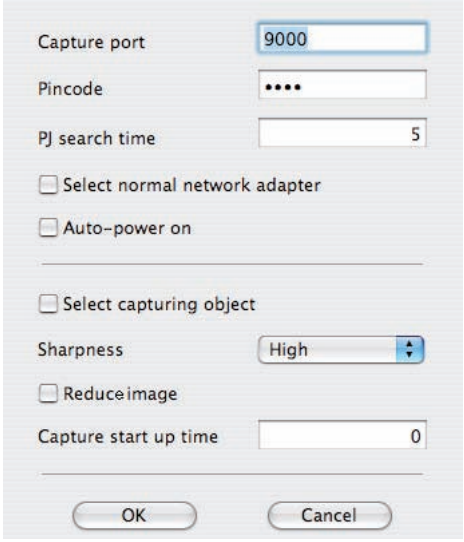
Parameter set up

Click **Parameter set up** button and setup the parameters on the Parameter setup window.

Items **Description**

Capture port ..... Sets the capture port no. on the projector. Default is 9000.
Pincode..... Sets the Network PIN code on the projector.
PJ search time..... Sets the time to search the projector between 1 to 60 seconds. Default is 5 seconds.
❑ Select normal network adapter
Uses default setting. Default is un-checked.
❑ Auto-power on..... The projector turns on and projects the computer's captured image on the screen automatically when the network capture is executed while the projector is in the standby.

Select capturing object .... Check if you want to select an individual window on the computer screen. This is useful function when you open the multiple windows on the computer's screen. When you execute the capturing, the window selection dialog appears. Select a window name from the dialog window. The projected window size is automatically adjusted to fit the projector's screen size.
Sharpness..... Select a capturing picture quality among "High", "Medium", "Low"
Reduce image..... Check if the capturing image resolution is more than projector's panel resolution (XGA),
Capture start up time ..... Sets the delayed time from the capture start in second.



✐ To check the Capture Port number, see item "Control by the web browser" (☞ p.91). To check the PIN code, see item "Network PIN code setting" (☞ p.30, p.39).
✐ Specify the port number of TCP/IP. The default port setting is 9000. There are some reserved port numbers and also some applications may use their own port numbers. If one of those port numbers is used, the alert dialog window will appear and let you know that it is an invalid port number. In that case, use another port number.
✐ The reserved port numbers are http (80), ftp (21), telnet (23), (25), (110), etc. The port no. 4352, 10000, 10001 are reserved to control the projector through the LAN port.
✐ The "Parameter set up" can not be operated during the real time capturing.

Using the Real Time Capture

This is a function to project the screen image of the computer by the projector in real time. The captured image projected by the projector can be selected from the computer, web browser and the projector respectively.

Registering the computers

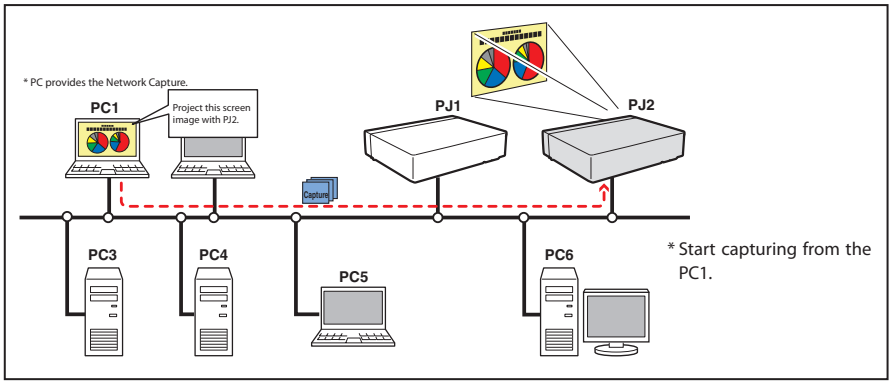
Up to 30 computers can be registered.

1 Access to the control page of the projector by using the web browser. From the **Network** menu, click **Capture** tab to display the setting page.

2 Switch to **Connection Setting** page by clicking the page number tab [3]. Enter the IP address of the computer to the PC number, and then click **Set** button. Click **Set** button to register the IP address for each page.

- The registered computer enables to start capturing if only the Network Capture 5 is activated.
- The transfer speed of the captured image using the Real Time Capture function is depending on the network environment and data volume of the image. It cannot be supported for movie pictures.
- The projector can not reproduce the sound during the real time capturing.
- "Spinning wait cursor " cannot be captured.

[1] Control by the computer



Select input mode to "Network" previously.

1 Start up Network Capture 5.

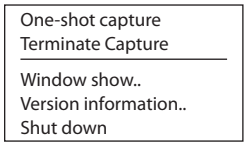
2 Select the projector(s) listed on the projector list on the application window and click **Start real time capture**. The application window will disappear and then the screen image of the computer will appear on the projected screen in real time.

* You can select multiple projectors (up to 5) on the projector list.

• To stop capturing, click **One-shot capture** on the popup menu appearing by clicking on the Network Capture 5 icon on the menu bar. The captured image of the computer on the screen is frozen.

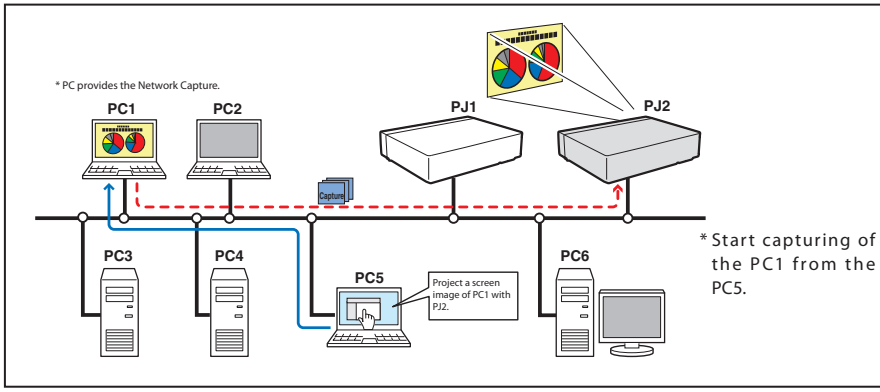
• To restart capturing, click **Start real time capture** on the popup menu.

3 To end capturing, click **Terminate capture** on the popup menu appeared by clicking on the Network Capture 5 icon on the menu bar.



✐ If the error message appears, check the item "Parameter set up" (☞ p.88).

[2] Control by the web browser



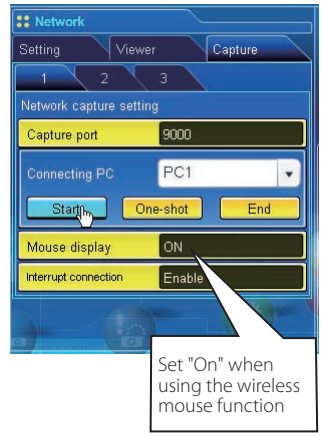
Select "Network" as input mode previously.

1 Access to the control page of the projector by using the web browser. From the **Network** menu, click **Capture** tab to display the setting page.

2 Select the computer number from the pull-down menu button of "Connecting PC" and click **Start** button. The screen image of the selected computer will appear on the projected screen in real time.

- To stop capturing, click **One-shot** button. The captured image of the computer on the screen is frozen.
- To restart capturing, click **Start** button.

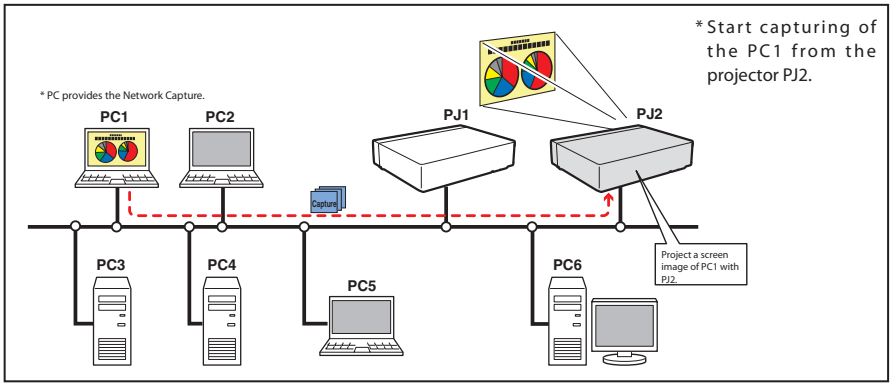
3 To end capturing, click **End** button.



Item	Description
Interrupt connection.....	Set enable or disable the real time capturing connection from other computers during executing the real time capturing operation.

✎ The IP address of the connecting PC should be registered previously (☞ p.89).
✎ If the error message appears, check item "Parameter set up" (☞ p.88).
✎ To use the capture function from the web browser or projector, the Network Capture 5 on the captured computer must be activated.

[3] Control by the projector



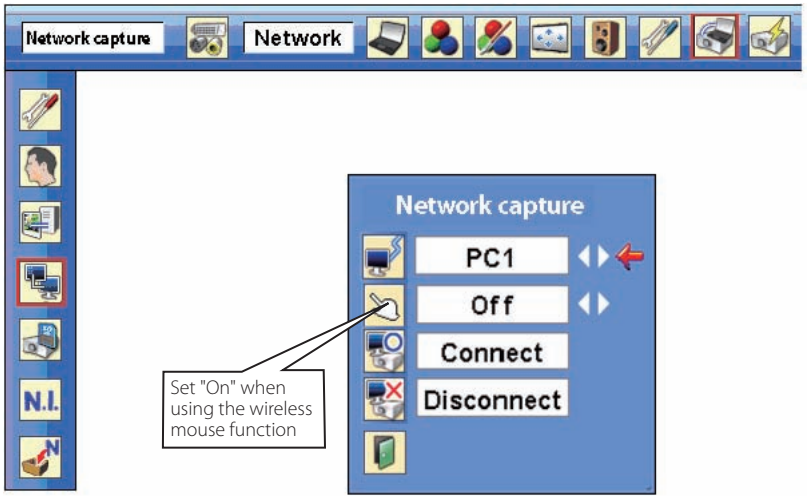
Select "Network" as input mode previously.

1 Select "Network Capture" icon from "Network" menu. Press **SELECT** button on the projector twice to display the network capture setting pallet.

2 Select PC number to connect .

3 Select "Connect" and then press **SELECT** button to start capturing. The screen image of the selected computer will appear on the projected screen in real time.

4 To end capturing, select "Disconnect" and then press **SELECT** button.



If the error message appears, check item "Parameter set up" (☞ p.88).

The projector does not provide the function to register the IP address of the computer and to set the parameter of the capturing. They should be registered by using the web browser previously (☞ p.89-90).

Example of advanced use

Displays the presentation data stored in the computer by using the wireless mouse function from the projector.

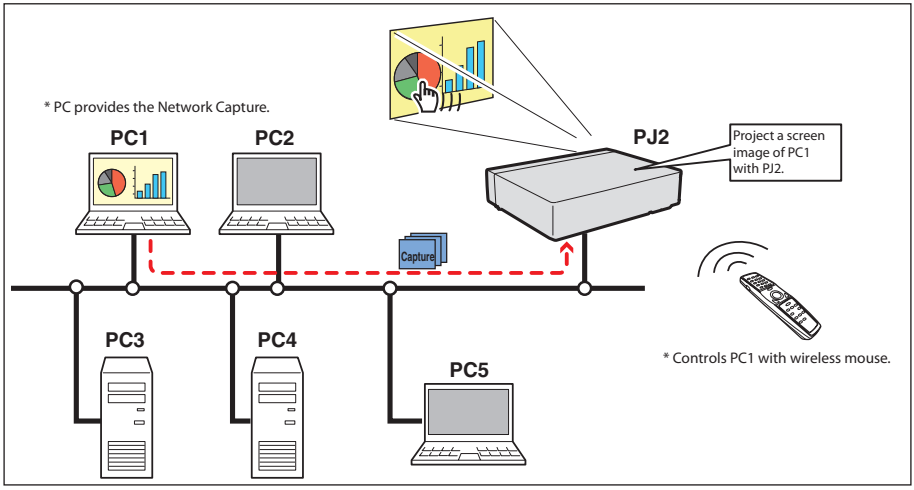
1 Start capturing of the computer PC1 by using the projector.
Select "Network Capture" icon from the menu and select "PC1" and then select "Connect" (☞ p.92).
=> The Network Capture software installed in the selected computer will start capturing.

2 On the image of the PC1 projected on the screen, search a presentation file data stored in the PC1 by using the wireless mouse function of the remote control supplied with the projector.

3 Select a desired file and double click with the remote control .
=> The application by which the document was created starts and the projector projects the presentation picture on the screen.

4 Start the presentation.
=> By using wireless mouse function, control the page browsing and some other operations for the PC1.

✐ For further instructions of the wireless mouse, please refer to the projector's owners manual.
✐ On the projected screen using with the network capture, the shape of the mouse pointer differs from the one on the computer's screen.



Setting condition

Projector
Input mode: Network
Registering the connection: The IP address of the computer and proper parameter must be set to the PC1 (☞ p.89-90).
Mouse Display: "On" (☞ p.91)

Computer PC1
Software: The Network Capture 5 is activated.

Error information

Error messages	Cause and corresponding
Cannot be displayed as PJ is under display.	Error when Start real time capture is executed. The other capture, viewer or memory viewer function is now operating. ➔ Wait until the communication function is available.
Cannot connect to PJ.	Cannot establish the connection with the projector when Capture transfer, Start real time capture or Terminate capture is executed. ➔ Check connection of the network cable.
Cannot transfer data to PJ.	Cannot transfer the data to the projector when Capture transfer, Start real time capture or Terminate capture is executed. The time-out period is 10 seconds. ➔ Check the connection of the network cable.
Invalid port number	When the parameter is set, the reserved port number is specified. ➔ Check the parameter setting (☞p.88)

✐ The Capture transfer is Windows-compliant, but non-Mac-compliant.

Chapter 9

9. Appendix

Use of telnet

Web browser setting

Firewall setting

Troubleshooting

Terminology

Use of telnet

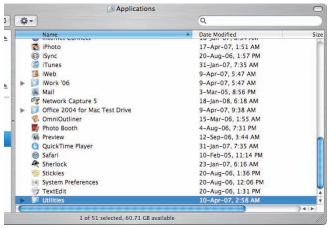
You can control the projector by using the telnet application*1 installed on your computer. Normally, the telnet application is available on your computer.

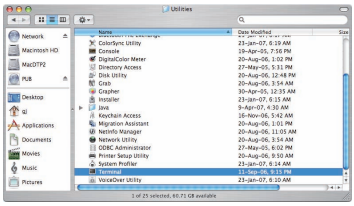
* The telnet 10000 port is used to control the projector.

Control

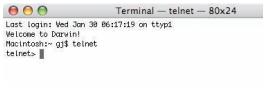
(For example, in case of using the telnet application of Mac OS X v 10.4)

1. Select **Terminal** from **Applications -->Utilities**. Type as below on the displayed window.
   > telnet [return]



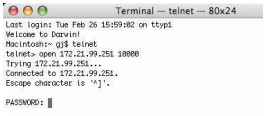


2. The telnet application will start and the following window will be displayed.



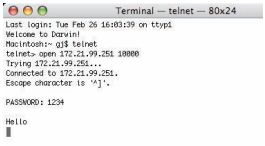
3. Type as below to connect the projector.
   > open_172.21.99.251_10000 [return]

   * Use the IP address assigned to the projector



4. When communication is established correctly, the word "PASSWORD:" appears on the window. Type the login password (Network PIN code*2) for the projector and then press "Enter" key on the keyboard. If you do not set up the Network PIN code, just press "Enter" key.
   When the word "Hello" is replied, login has been succeeded.

   * The password "1234" is used for the example.



5. Type the commands, refer to below table, to control the projector and then press "Enter" key for termination. For example, type "C00" which is a command to turn on the projector, and press "Enter" key. Confirm the projector is turning on.

To disconnect the communication, press "Control" key and "]" key at the same time.

The table below shows the typical command lists for controlling this projector and please consult your local dealer for further information of another commands.

Command list table

Command	Function
C00	Power on
C02	Power off
C09	Volume up
C0A	Volume down
C0B	Audio Mute on
C0C	Audio Mute off
C1C	Menu display on
C1D	menu display off

*1 Further instructions about the telnet application, please see the on-line guide on your computer.

*2 The password is a Network PIN code decided item "Network PIN code setting" (☞p.30, 39). If the authentication of the entered password is failed 4 times continuously, the communication will be disconnected automatically. Please try again for the connection.

Web browser setting

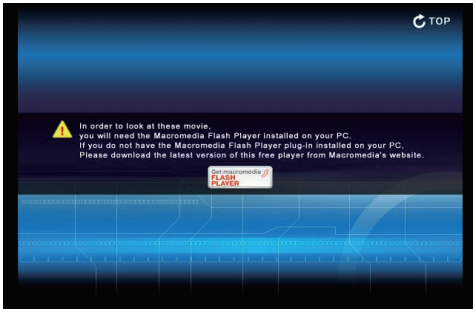
This product is designed to enable the projector to be set up and controlled from an Internet web browser. Depending on the preference settings of the web browser, some control functions may not be available. Please make sure that the following functions are set up properly in the web browser.

JavaScript enable

There are some control items used with the JavaScript function in the setting pages. If the web browser is set not to use this JavaScript function, it may not control the projector properly. In that case, the following warning message will be displayed on the top of the page. To enable the JavaScript, please see further instructions on the next page.

Flash Player enable

The setting page of this product contains the Flash contents. To display the setting page, the Adobe Flash Player version 6 or later is required to be installed on your computer. For further product information, see the Adobe homepage. (http://www.adobe.com). Even if your computer provides the Adobe Flash Player, the setting page does not appear on the web browser, in which case, check that Flash Player Plug-In(Shockwave Flash) is installed and set up correctly. Please see further instructions on the next page and it is depending on the web browser.


TOP
In order to look at these movie,
you will need the Macromedia Flash Player installed on your PC.
If you do not have the Macromedia Flash Player plug-in installed on your PC.
Please download the latest version of this free player from Macromedia's website.
Get macromedia
FLASH
PLAYER

Proxy setting

In some cases, your web browser is set up to use the proxy server for the internet or intranet connection. In that case, when you install this product into the local network, you should set up the proxy setting of web browser preference correctly. Especially when connecting the projector and computer with a UTP cross cable directly, or when the network does not provide the proxy server, make sure that "not use proxy server" is set up in your web browser preference. Please see item "Examples: OS/Browsers" in the next page for further setting up procedure.

✎ There are various ways to change your browser preferences depending on the version or applications. Please see the setting instructions on next page showing examples and also refer to on-line help of your web browser.

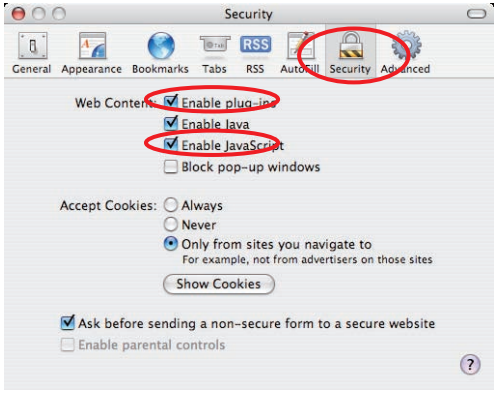
Examples: OS/Browsers

MAC OS X v 10.4

Safari

JavaScript and Flash Player enable setting

Select **Preferences...** from **Safari** on the web browser and then select **Security** tab and check **Enable plug-ins** (for flash player) and **Enable JavaScript**.



Proxy setting

1 Open **Preferences...** from **Safari** menu on the web browser **Safari**. The preference menu appears.

2 Select **Advanced** icon and then click **Proxies: Change Settings ....**

3 Select **Proxies** tab and properly set up your web browser **Safari**'s the proxy server settings according to the local area network environment to which the projector is connected.

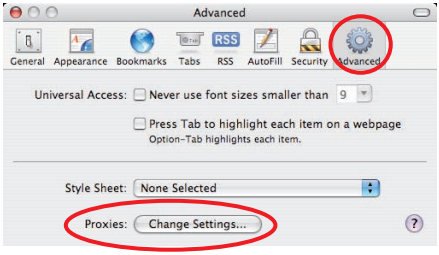
- Using proxy server

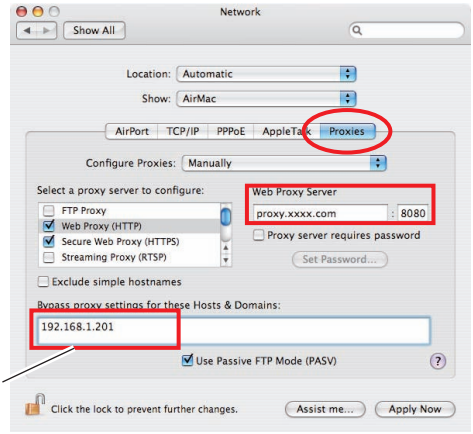
To use an external internet connection from the local area network, check the items **Web Proxy (HTTP)** and **Secure Web Proxy (HTTPS)** of **Select a proxy server to configure** window and enter the proxy server address and port correctly in **Web Proxy Server** window. For further instruction please consult your network administrator.

- Not using proxy server

Uncheck the items **Web Proxy (HTTP)** and **Secure Web Proxy (HTTPS)** of **Select a proxy server to configure**.

If you connect the projector to the computer directly with UTP cross cable, they must be unchecked.





To designate proxy settings that will not use the proxy server when accessing the projector installed in the local area network, enter the IP address or domain name here.

Firewall setting for MAC OS X v 10.4

When you use Macintosh OS X v 10.4 and Network Capture 5, you can cancel the firewall blocking following to the steps below;

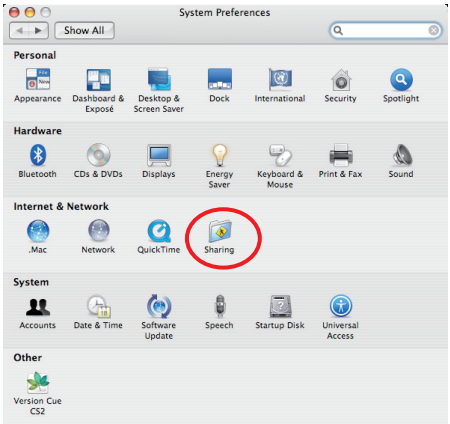
1 Open **System Preferences** from **Apple** menu, click **Sharing** icon. The **Sharing** setting window will appear.

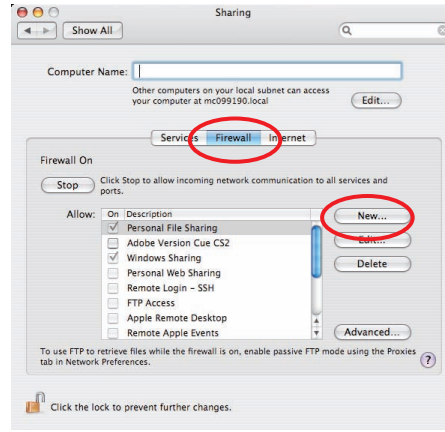
2 Select **Firewall** tab and click "**New...**", then a dialog box appears.

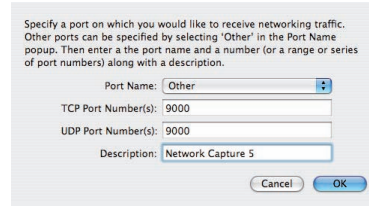
3 Specify the items as follows;

Port Name : **Other**
TCP Port Number(s) : **9000**
UDP Port Number(s) : **9000**
Description : You can name as you like. "Network capture 5" on the figure is just an example.

4 Click **OK** to close setting.






Specify a port on which you would like to receive networking traffic. Other ports can be specified by selecting 'Other' in the Port Name popup. Then enter a the port name and a number (or a range or series of port numbers) along with a description.
Port Name: Other
TCP Port Number(s): 9000
UDP Port Number(s): 9000
Description: Network Capture 5
Cancel
OK

Firewall setting for MAC OS X v 10.5

If you use Macintosh OS X v 10.5 and Network Capture 5, you may see the security warning dialog as below. In that case, click "Always Allow" button on the dialog to enable the function of Network Capture 5.

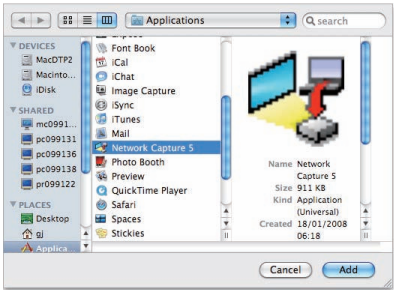
Do you want the application "Network Capture 5.app" to accept incoming network connections?
Clicking Deny may limit the application's behavior. This setting can be changed in the Firewall pane of Security preferences.
Deny
Always Allow

Even if you select "Deny", you can cancel the blocking following to the steps below;

1 Open **System Preference** from **Apple** menu, click **Security** icon. A security setting window appears.

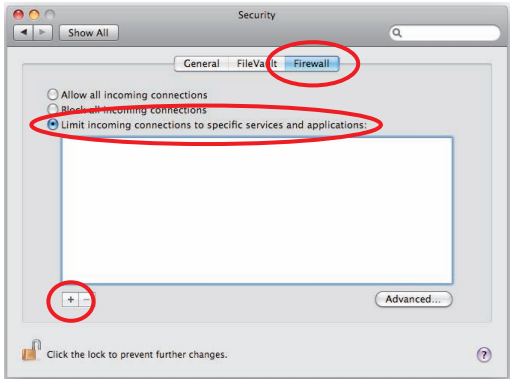
2 Select **Firewall** tab, check **Limit incoming connections to specific services and applications**, and then click "+". A finder menu appears.

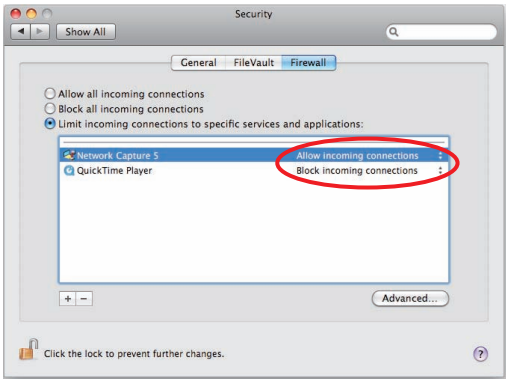
3 Select **Network Capture 5** and click **add** button. The application name will be added in the column.



4 Click the options of "Allow incoming connections" or "Block incoming connections" in the column and select "Allow incoming connections".

5 Close setting.





Troubleshooting

If you have any trouble in setup or operation of the projector, refer to the troubleshooting items and check the relevant matters described.

■ The computer cannot connect projectors.

Wired LAN

Is the LAN cable connected to the projector properly?
Is the LINK/ACT lamp of the LAN terminal lighting properly?
Not lighting : The LAN setting of the projector is set "On"?
See "Wired setting" in the projector menu.
The LAN cable is connected to the network HUB properly?

Wireless LAN

Is the WIRELESS indicator on the front panel of the projector lighting?
If there are not any problems, confirm the LAN setting again. Refer to the next item.
If the wireless LAN card provides the firewall function itself, set up to disable its function.

■ Wireless LAN Connection cannot be established.

AdHoc Mode:

When selecting LAN4(factory default setting)

Check each item in the Wireless Setting menu of the projector as follows:
*IP Address.....Is the address appropriate? Should not be the same as the other IP address.
*Sub net..... Should be the factory default value, 255.255.0.0.
*Gateway..... Should be the factory default value, 255.255.255.255
*Network Type..... Should be AdHoc mode
*ESSID/SSID ..... Should be the same as the setting of computer
->Check the setting for the computer
*Is the Wireless channel set as 11 both for the computer and the projector?
-> The factory default channel of the projector is 11.
*WEP (Wired Equivalent Privacy) Should be disabled.

Infrastructure Mode:

When selecting LAN5 (factory default setting)

Check each item below in the Wireless Setting menu of the projector as follows:

*IP Address..... No setting is required.
*Sub net..... Should be the same as the setting of the access point
*Gateway..... Should be the same as the setting of the access point
*Network Type..... Should be the Infrastructure mode
*ESSID/SSID ..... Should be same as the setting of the access point

Check the settings for projector Client computer

*IP Address..... No setting is required. Automatically set as DHCP.
*Wireless Channel ..... Should be 11
*ESSID/SSID... ..... .Should be the same as the setting of the access point
*WEP ..... Should be disabled.

*When LAN5 is used, it is necessary DHCP server is under the environment enabling those servers communicate through networks. Some access points may have the DHCP function. For detail of the settings, refer to the owner's manual for the devices or consult a system administrator of the network.

Is the segment where the projector is installed different from the computer?
Specify IP Address directly on the optional setting. Refer to "4. Wired LAN Configurations" ➔ "Confirming the Operation" (☞p.28–29).

■ **Connection between computer and the projector via Wired LAN cannot be established.**

When selecting LAN1 (factory default setting)

Check IP address, Sub net and Gateway of the projector and computer. For further details of the configuration, contact your system administrator.

Is the segment where the projector is installed different from the projector?
Specify IP Address directly on the optional setting. Refer to "4. Wired LAN Configurations" ➔ "Confirming the Operation" (☞p.28–29).

■ **Cannot start up the browser**

Is the connection between PC and the projector with Network Capture 5 established?

No..... Check settings for Wireless/Wired LAN.
Yes..... Check settings of the proxy setting at browser. Refer to "Web browser setting" (p.98).

■ **Although the connection between PC and the projector is established, images are not projected on the screen.**

Make sure Wireless/Wired is selected from the Input source menu of the projector.

■ **Cannot be turned on/off with the web browser.**

Make sure the settings of the projector are correct to use the projector with it.
Set the item Standby mode to "Normal" from Main menu ➔ Setting menu.
Refer to "7. Controlling the projector" ➔ " Power control and status check" (☞p.65).

■ **Wired / Wireless input cannot be changed. Network Capture 5 cannot be operated.**

Restart the projector or Network Capture 5.
Execute "Wired factory default" or "Wireless factory default" menu on the projector.

Caution: After executing "Wired factory default" or "Wireless factory default" in the projector menu, all the network settings you have made will return to the factory default settings. See the items "Wired factory default" (☞p.31) and "Wireless factory default" (☞p.41) for the each factory default value.

Network capture

■ **Why doesn't the computer screen appear on the projected screen?**

1. Make sure that the input mode of the projector is "Wired" or "Wireless".
2. Check the parameter set up (☞p.88).
   Make sure that the numbers of the capture port is the same as the projector's port number. The default port number is 9000. If the alert message "Invalid Port No." appears, your computer may be using this port number already. In that case, use another port number.
3. Check the IP address of the computer is registered to the projector correctly (☞p.89).
4. Make sure that your computer is not using the firewall function. The projector may not be able to use the port due to this firewall function. In that case, please turn off this function temporarily. There are also some port limitations on the network equipment such as router. Please consult your network administrator. (☞p.101-102)

■ **Speed of playing back images are very slow.**

When connecting on AdHoc mode, check which Wireless channel you are using.
If the computer using the same channel as yours is existing closely, the networking speed may be reduced or the communication unstable. Change the channel to resolve the problem. The channels of the projector and projector Client computer must be the same. Or adjust the Quality selection in the parameter setting.
Refer to "Parameter set up" (☞p.88).

Terminology

DHCP server (Dynamic Host Configuration Protocol)

It is necessary to set an IP address for each computer or equivalent equipment when a network is established by TCP/IP. If there exists DHCP server on the network, it will assign IP addresses to client computers every time they request it. If there exists equipment with DHCP server functions (such as a server and a router) on the network, the DHCP server function may be automatically operating. Ask your system administrator whether the DHCP server is operating.

ESSID (Extended Service Set Identifier)

ESSID is the ID that is set to computers on Wireless LAN or access point in order to prevent each computer from being crossed. The computers or access point to which the same ESSID is set can communicate with each other. If an ESSID is different, it is impossible to communicate. ESSID distinguishes between lowercase and uppercase characters, and allows you to use English one byte characters and half-size symbols up to 32 characters.

WEP (Wired Equivalent Privacy)

WEP is a security protocol for Wireless LAN. It protects computers on Wireless LAN and access point from unauthorized access by setting a description code onto them. It is necessary to set the same decryption code for equipment.

Wi-Fi (the Standard for Wireless Fidelity)

Wi-Fi is short for Wireless fidelity and a marketing brand name for IEEE 802.11b High-Rate. Only the products that have passed an inter-operation test carried by WECA is approved as Wi-Fi. Any products approved as Wi-Fi are certified as interoperable with each other by WECA. It is recommended to use the products approved by Wi-Fi when you introduce network equipment such as local area network.

Wireless Channel

It is necessary to divide frequency spectrums into some Wireless channels for Wireless communication, and to tune to the same channel between Wireless equipment. If you use the same channel on the same floor, and there are some Wireless LANs that have a different ESSID for each, the communication speed may become slow. In that case, using different channels for each Wireless LAN is effective, which lowers a possibility of mutual interference between Wireless LANs

WECA (Wireless Ethernet Compatibility Alliance)

WECA is an organization promoting IEEE802.11b High -Range standard and assuring the compatibility of products that meet the standard.

MAC address (Media Access Control Address)

MAC address is a physical address for every network interface. The MAC address consists of 6-byte hex number. The first 3 bytes are a Vendor ID controlled and assigned by IEEE. The last 3 bytes are controlled and assigned by the manufacturers of network interface (no duplication of MAC address). Therefore, MAC address is a unique physical address in the world. Ethernet sends and receives frames on the basis of MAC address.

EIKI

U.S.A.
EIKI International, Inc.
30251 Esperanza
Rancho Santa Margarita
CA 92688-2132
U.S.A.
Tel : 800-242-3454 (949)-457-0200
Fax : 800-457-3454 (949)-457-7878
E-Mail : usa@eiki.com

Deutschland & Österreich
EIKI Deutschland GmbH
Am Frauwald 12, 65510 Idstein
Deutschland
Tel : 06126-9371-0
Fax : 06126-9371-14
E-Mail : info@eiki.de

China
EIKI (Shanghai) Co.,LTD
1. Dapu Road, Golden Magnolia
Plaza #2109 Shanghai,
200023 China
Tel : 86-21-5396-0088
Fax : 86-21-5396-0318
E-Mail : info@eiki-china.com

Canada
EIKI CANADA - Eiki International, Inc.
P.O. Box 156, 310 First St. - Unit 2,
Midland, ON, L4R 4K8, Canada
Tel : 800-563-3454 (705)-527-4084
Fax : 800-567-4069 (705)-527-4087
E-Mail : canada@eiki.com

Eastern Europe
EIKI CZECH spol. s.r.o.
Umělecká 15
170 00 Praha 7
Czech Republic
Tel : +42 02 20570024
+42 02 20571413
Fax : +42 02 20571411
E-Mail : easterneurope@eiki.de

Japan & Worldwide
EIKI Industrial Company Limited.
4-12 Banzai-Cho, Kita-Ku, Osaka,
530-0028 Japan
Tel : +81-6-6311-9479
Fax : +81-6-6311-8486

WorldWide Website http://www.eiki.com

SO-MAC-KF3BC
NETWORK OWNER'S MANUAL FOR MACINTOSH

© 2008 Eiki International, Inc.